THE CULTIVATOR.

THIRD] TO IMPROVE THE SOIL AND THE MIND. [SERIES.

VOL. XII. ALBANY, N. Y., MAY, 1864. No. 5.

PUBLISHED BY LUTHER TUCKER & SON,
EDITORS AND PROPRIETORS, 395 BROADWAY, ALBANY, N.Y.

TERMS—SIXTY CENTS PER YEAR.—Ten copies of THE CULTIVATOR and Ten of the ANNUAL REGISTER OF RURAL AFFAIRS, with one of each free to the Agent, Six Dollars.

THE CULTIVATOR has been published thirty years. A NEW SERIES was commenced in 1853, and the eleven volumes for 1853, 4, 5, 6, 7, 8, 9, 60, 61, 62 and 63, can be furnished, bound and postpaid, at $1.00 each—the set of 11 vols. sent per Express for $8.25.

"THE COUNTRY GENTLEMAN," a weekly Agricultural Journal of 16 quarto pages, making two volumes yearly of 416 pages, at $2.00 per year, is issued by the same publishers.

The Cultivator & Country Gentleman.

SUGAR MAKING AT THE WEST.

The subject of Sugar Making at the West is one of increasing importance. But, as was conclusively shown in the Report of Mr. GOULD, read at the Winter Meeting of our State Agricultural Society, very far less has as yet been accomplished in this direction, than some exaggerated accounts have lead the public to suppose.

From the last number of the Prairie Farmer, we learn that the extensive sugar works of Messrs. Gennert Brothers, at Chatsworth, Ill., have been at last so far completed as to admit of the first experimental trial in the making of Beet Sugar. It was on a limited scale, and not so conducted as to give us the basis of any exact figures, as to cost, or percentage of sugar obtained from beet roots, although a rough estimate places the latter at 6 per cent. Our contemporary says:

> The whole experiment so far has shown that in one of the worst of seasons, a crop of beets can be grown here fully equal in amount to the best average of European crops, and with a favorable season we may expect a larger average yield. It has been shown that by proper pitting they can be kept with quite an indifferent covering through one of the hardest winters on record, coming out of the pits at this season of the year perfectly sound and crisp. It has shown by a careful analysis of the beets that they are as rich in saccharine matter as those of the old countries—giving 12⅓ per cent. of crystalizable cane sugar, and 3½ per cent. of other soluble impurities. It has shown that no obstacles present themselves to prevent the ready extraction of the sugar from them.

These are certainly gratifying results, if fully borne out in farther experience, and it is much to be hoped that the enterprise of the Messrs. Gennert will be crowned with success. But with all the capital invested in it, and the length of time that has now elapsed since we first began to receive accounts of its progress, we cannot repress some feeling of disappointment that still more has not yet been done. There is nothing in the account given to show the quantity of sugar actually made; definite figures throughout seem to be carefully avoided, and we can only infer from incidental remarks that but a few pounds could have been turned out at each of the several trials, although these occupied "most of the time for two weeks." It is at least a beginning, to be sure: but how encouraging a one, we are, after all, really unable to determine.

Cognate to the production of Sugar, is the continued growth of the Sorghum for making Syrup. Our readers are probably aware that unfavorable seasons, growing scarcity of labor, imperfect processes of manufacture, and other causes, have operated to lower even syrup-making from this plant, very much in the popular regard of late. Whether it will recover the lost ground, or not, cannot yet be known; it is evident that the manufacture must be placed on a different basis before such is the case. Mr. DUNLAP of the Illinois Farmer, argues that the home making of the syrup must be abandoned, and that it can only be successfully and well manufactured at large establishments provided with good machinery and other facilities, to which the farmer shall either sell his cane, or have it worked on shares. Transportation on the cane from any distance will be a heavy burden on this plan, coming as it does at a time when other matters are likely to occupy the farmer's time quite closely. This objection aside, the argument is apparently a strong one.

A description is given of an extensive manufactory of sorghum syrup at St. Johns, on the Illinois Central Railroad, 286 miles south of Chicago, with a building, 35 by 60 feet, occupied by the machinery, including, a 40-horse power engine, and a shed of the same size for storage of cane. Its capacity is calculated at from six to eight hundred acres of cane, allowing a season of a hundred days from the middle of August till toward the close of November. This mill cost six thousand dollars as it stands; and it was calculated that the vinegar made from the skimmings of the syrup will pay the actual cost of running. Last autumn 5,000 gallons of syrup were made, together with 200 bbls. of vinegar, from 250 acres of cane planted—but so injured, by drouth and frost combined, as to render the crop almost an entire failure, and the production of syrup only about one-tenth the anticipated average from such a surface.

As the article states from which we derive the foregoing figures—"The sorgho question to a great extent, has been monopolized by patent evaporator men, and those having seed for sale. An immense amount of puffing, if not downright lying, has been done on their account. Instead of a detailed history of facts, we have had a surfeit of sorgho literature or book

culture, from Wray and Olcott down to the present time, in which has been sandwiched now and then a fact." We trust the time is coming when the actual facts of experience, both as regards sorghum and beet culture, will be more accurately recorded and more generally accessible; and we therefore welcome every article tending in this direction, like the two above noticed. If space permitted we should like to give fuller extracts from them both.

SEEDING TO GRASS.

It is believed that the objection which commonly prevails in dairy districts against newly seeded meadows and pastures, would in great measure be removed by thick seeding. The coarse hay of new meadows is caused by the fewness of the stalks; and the same objection, no doubt, holds true with pastures. Sow the seed so thickly as to cause a compact, soft growth, and the land will not only yield a much larger amount, but the grass will be more delicate and palatable. The first position we have sufficiently proved by repeated experiment—a half-bushel of seed per acre giving more than double the returns from a half-peck.

A large amount of seed is frequently lost by bad seeding—either by not covering the seed, covering it too deeply, or with a hard and partially sterile soil. The difference between a perfect and a bad covering will be more than equal to the difference between a light and heavy amount of seed. Sprinkle the seed, for instance, over a smooth, mellow surface, and then cover the whole evenly with one-fourth of an inch of finely pulverized compost—nearly every seed would be sure to grow, and in a few weeks the appearance would afford a striking contrast to that resulting from the more common mode of treatment, viz., scattering the seed over a hard, rough surface, and leaving it uncovered, or else covering it so deep that it cannot grow. It is of great importance to have a fine rich surface, not only to assist complete germination, but to accelerate the plants afterwards. We wish to propose an experiment for every farmer to try, and if he does not reap from it, by the practical demonstration it affords, more than twenty-five dollars, we shall be much mistaken. First, sow his grass seed on his winter grain as usual, and let it take its chance. Next, let him sow the same amount of seed for a given surface in the manner we have indicated; or if this is attended with too much labor, nearly the same results may be obtained as follows: Prepare the ground in autumn either by turning over with a plow, the wheat, oats or barley stubble, and making it smooth and mellow with a fine harrow. Then, before or during the early part of winter, give the whole surface a moderate and even dressing of fine manure. The rains and melting snows will carry most of this into the top soil, and the remainder will keep the ground moist and mellow, and prevent baking. As soon as the soil is dry enough to work handsomely, and not before, sow the seed, and follow the sowing with a fine, even brushing, or with a very fine, light harrow, made by driving large cut-nails, sloping backwards, through a plank harrow-frame. This process may be variously modified, according to circumstances,—the object being to place the grass-seed in a fine well enriched surface of soil, where it may be slightly and evenly covered. Perhaps a better way would be to harrow the surface lightly at first, sow the seed, and press it into the mellow surface by means of a roller. Land thus seeded will afford a handsome crop of grass the same year, and have the start, by at least one year, of many fields as commonly seeded at the same time on winter grain. These remarks will apply to timothy, clover, and other seeds.

SUGGESTION TO TREE PLANTERS.

Those about to set out young trees, or fruit-bearing or ornamental shrubs, should remember that the great leading object is to obtain a thrifty growth on the start. Reject, therefore, all *large* trees, for it is nearly impossible to take them up without leaving at least nine-tenths of the roots in the ground, including nearly all the small fibres. Such mutilated trees grow but little for several years, and then slowly recover from the effects of the removal; while a small, thrifty tree, taken up with plenty of roots, starts off at once, grows rapidly, and not only overtakes the larger one, but makes a handsomer and healthier tree, and bears larger and better-flavored fruit.

Another point, equally important, but very often neglected, is cutting back young trees, vines, &c., when they are set out. Take a grape-vine, or a prairie rose, for instance, and place it in the hands of a novice, and it will be nearly impossible to persuade him to cut off the "long, handsome, thrifty vine," five or six feet in length, leaving only a few inches, next the root. Yet, if this operation is not performed, the plant will remain nearly stationary the first season, while otherwise, it would grow freely, and perhaps double or triple its former size. For the same reason, raspberries, gooseberries, &c., should be cut back freely when transplanted. The heads of young apple and pear trees, if shortened-back in the same way, may be made to preserve their original form, or any new shape may be given them, without any loss, but a great gain in their growth. Peach trees, possessing a strong reproductive power, may be cut back most freely of any fruit tree—next apples and pears—then plums, and lastly cherries. The latter may have half of each yearling shoots removed.

But it is of the utmost importance that this cutting back be done before there is any swelling or expanding of the buds, otherwise the growth will be checked by the operation, instead of accelerated. This is especially the case with cherries and plums, which start more feebly than peaches and grapes. A main reason why cutting-back has failed with some, is doing the work after the buds have swollen or leaves expanded.

THE BEAN CROP.

We select a suitable spot of ground, dry and sandy if possible, and clear of weeds. Care is taken to plow the ground evenly. Then the ground is thoroughly harrowed, pulverizing the clods. The ground is then furrowed out with a shovel plow 3 feet apart each way. We plant by hand, put six beans in a hill, and cover with a hoe 2 or 3 inches deep. As soon as the beans are up enough to distinguish the rows, we use a cultivator the first time going through. All subsequent plowing is done with the shovel plow, keeping the ground clear of weeds. As soon as the crop is ripe we

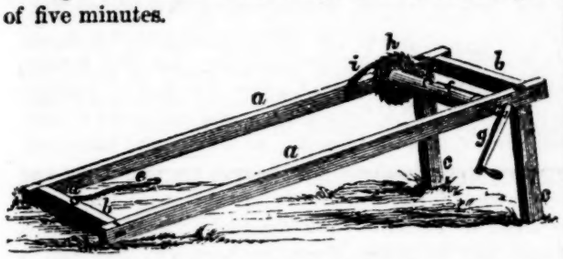
pull the beans by hand, and stack them firmly round a pole firmly placed in the ground, with the roots to the pole. The stacks are covered with hay. The stacks remain in this condition until the beans are thoroughly dry, when they are threshed.

20th Indiana Regiment. H. E. OLINGER.

A "DEACON SKINNER."

EDITORS CO. GENT.—In this age of improvement any triumph of mind over matter—any invention of labor-saving machinery is hailed with pleasure and gratitude to the inventor. The calling of our strong young men to arms, obliges the weak ones left behind to economize labor in every available way or manner possible. We know not what genius and skill has yet in store for us. Having in a *late* trip (looking for fat sheep,) discovered a "new thing under the sun," I hasten to lay before your readers the fact that a new era has dawned (perhaps) upon an important branch of the farming interest. In a bye-corner of an unused shed, I stumbled over a frame of certain dimensions that excited my curiosity. Upon inquiry I found it to be—*a patent-right "Deacon" skinner.*

Now all of your dairymen readers know what a "Deacon" is, and how much a "Deacon skin" is worth after it is "off"—and I'll bet they know how much it is worth to get it "off" without cutting it. This machine is warranted to effect the desired result without damage to the skin in the least, and in the short space of five minutes.



There is first a frame of 3 by 4 scantling—sides (*a*) 10 ft. long—ends (*b*) 2 ft. One end of this frame rests upon the floor or ground—the other end upon two legs (*c*) 18 inches or 2 ft. long. To the centre of the end upon the ground at (*d*) is fastened a piece of small chain (*e*) with hook, 7½ ft. long—at the opposite end, one foot from the cross-piece, is a roller (*f*) of wood, 4 inches in diameter, with crank and handle (*g*.) Upon the opposite end of the roller from the crank is a ratched wheel (*h*) made of a thin plate of iron, 8 inches in diameter, with notches and an iron "dog" (*i*) following in the notches and fastened to the frame—a rope 10 ft. long is attached to the staple (*j*) upon the roller (*f*.)

The subject is ripped down the legs along the belly, the head skinned, and then placed inside of the frame, the chain hooked around the neck, the rope upon the roller is attached to the skin at the head. As the rope is wound upon the roller the skin follows as a matter of course, and with an occasional cut of a knife the whole job is finished in less time than I am writing this, or as the man said, "before the calf had done kicking."

Bainbridge, N. Y. J.

SHEEP PULLING THEIR WOOL.

In the winter of 1863 I observed that several of my sheep were pulling their wool; and after repeated examinations, discovered a small parasite, about the size of a common head louse, of a reddish hue, which I suppose produces the irritation that causes the sheep to pull their wool. I applied Scotch snuff, opening the wool and using a pepper-box to sprinkle it on the skin, repeating the application after two or three weeks.

This treatment seemed to check the evil for the time, but the past winter they returned to their old practice of pulling, when I again applied the snuff, also some kerosene oil. From my observations, I judge that this parasite is more tenacious of life than the common tick, consequently will require a more stringent remedy.

I should be glad to hear if any of your subscribers have been troubled in a similar way, as they are an entirely new thing in this section.

Montgomery Co., N. Y. HENRY VOORHEES.

REMEDY FOR HORN-AIL.

In reference to the two articles in the COUNTRY GENTLEMAN—the one of April 2d, and the other of April 16, 1863—on the disease termed Horn-Ail, without adverting to the prescriptions contained in these articles and the sad results, I would merely say that the best remedy for the horn-ail, and the most mild in its results that I have ever used, is to pour a tablespoonful of melted butter (something salter than used for culinary purposes,) into each ear of the creature. I have never known it to fail in effecting a cure. It may be repeated if necessary. Cattle that are kept in a comfortable stable in winter, and well cared for, will rarely be troubled with horn-ail.

The symptoms of horn-ail are sunken eyes, dry nose, cold horn next to the head, and rough hair. Every person who keeps cattle should closely watch their appearance, and if found unhealthy, ascertain the cause and apply a remedy without loss of time.

Lyn, Canada West. M. W. H.

THE POTATO BUG---Cantharis Americana.

In the Co. GENT. of March 10, "J. J. C." of North Madison, Ind., complains of the ravages of the potato bug, and wishes to know if there is any remedy. This insect often proves very destructive to potatoes, beets and other crops in the southwest. It suddenly appears in great numbers in the potato fields, devouring the entire leaves over many acres together. The stems thus stripped present a novel appearance to one not acquainted with the destructive habits of the insect. It is known as the *Cantharis Americana.* In size and shape it resembles the Spanish fly of the shops, though its color is either a jet black, or some of them have a narrow white or ash colored stripe running the length of the wing cases.

During the war of 1812, Dr. Rush of Philadelphia, used it extensively in his practice as a substitute for the Spanish fly. It eats with such voracity that its body is always distended to its utmost capacity, which renders it easy to dislodge by a slight jar.

The only means that I have seen proposed for their destruction is to jar them from the plants into a basin of hot water, a method only practicable to a small extent in the garden.

They seldom appear two years in succession in the same locality, and it is sometimes years before they return the second time in the same place. H. P. B.

Prices of Cheese, Butter and Wool.

As soon as the war ends, and gold falls to its par value, these cheese factories will see "hard times." Cheese is now worth 16 cents per pound. But with gold at 160, this 16 cents is only equal to 10 cents. The extra 6 cents a pound is *entirely fictitious*. It is amusing to hear the present high price of cheese ascribed to the improvement which has been made in the quality of the cheese. It is due simply to the fact that the cheese is sent to Europe and gold is obtained for it, and 10 cents of gold is equal to 16 cents of our paper money.—*Genesee Farmer for April.*

If there had not been "improvement made in the quality" of our Cheese, should we have been able to send it to Europe and "obtain gold" for it? It has been exported, it is true, to some extent, in former years; but was the "quality" either good enough, or uniform enough, for us to retain the market? We think it is likely to be, under the Factory system.

Again, will not 10 cents a pound for Cheese pay well (in ordinary times)—say as well as 30 cents a pound for Butter? In other words, when 20 to 23 cents a pound has heretofore been a good price for the best butter dairies, will cheese-makers suffer very badly, in comparison, supposing they should, after a return to a "specie basis," net no more than 8 cents a pound at home?

We would not say one word to encourage our readers in "rushing into" cheese making or sheep-raising, or taking up any one temporary and speculative branch of their business; but we do want to see this matter of *quality in our cheese* set in its proper light. We have not yet reached the point in this respect we may obtain. The last London Mark Lane Express quotes "American cheese" at 44 to 58 shillings sterling per cwt., while "Cheshire cheese" sells from 60 to 74 shillings, and "Double Gloucester" from 60 to 68 shillings: is there any reason why we should not receive an equal price with the English farmer, except that we have not carried our "improvement" *far enough?* We take it that the "Factory cheese" made in this State reaches the highest figure quoted (58*s.* per cwt.); this is 3 cents a pound in England, or not far short of 5 cents a pound here, better than the lowest-priced that is quoted, and there is at least cause for congratulation that so much has been accomplished. With the same system carried to the degree of farther perfection which we think it may be made to reach, and with the determination on the part of our factory managers to send nothing to market of an inferior grade, we fully believe that our cheese farmers may secure not a continuance only, but a considerable enlargement of the present foreign demand.

Butter, just now, *is* proportionably higher than cheese, and it *may* remain throughout the year *as high* in proportion—but it will be unfortunate for us in the city who consume it, if it should.

As to *Wool*, (which is also alluded to in the article from which the above extract is taken) the *finest grades* have at no time been much beyond old prices, after allowing for the price of gold. Coarse and long wools have been more enhanced by the war demand. Those who are paying "fancy prices" just now for Merino rams should bear these facts in mind: In January, 1860, wool of low grades sold at 42 cents; Saxony fleece at 60—in January, 1864, the former at 73, the latter at 85 cents. There has been some rise in gold during the past three months, but it has not affected the value of wool—which, if it had risen since 1860 at the same rate as gold, (calling the value of the latter 160 at present,) should stand now at 67c, for low grade, and 96c. for the finest—in other words, relatively to specie fine wool is now lower and coarse not very much higher than before the war. That this is so, is doubtless owing to the increased attention given to sheep, which has thus far been of undoubted advantage to the country, and remunerative to farmers at large. But how remunerative it is likely to prove, in individual cases in which enormous sums have been paid for a few sheep that happened to come from this or that "celebrated flock," we leave it for the future to determine.

In making such calculations as to prices of farm products in comparison with the present price of gold, or depreciation in currency, we do not think the results represent quite fairly the true state of the case. We have only attempted to show that *if* they do apply to dairy products, they apply with equal force to whatever else the farmer raises. His land, however, has not advanced in value in the same measure as the premium on gold has risen; labor, difficult to procure as it is in many cases, has in few, if any, appreciated in as great degree—and we are disposed to consider the derangement in our currency as a temporary matter—contributing while it lasts quite as much to the *farmer's* profit, if he manages his affairs with prudence, as it can to his inconvenience or loss. It facilitates the payment of the debt which has been so enormous a burden upon our farmers generally; they are enabled to make everything snug for any financial storm that the future may bring with it, and by a proper expenditure of their present receipts in the better stocking of their farms, and in all directions tending to permanent improvement, they will be ready to meet low prices, when low prices shall come, to better advantage than at any former period in their history.

SEEDING WOODLANDS TO BLUE GRASS.

I take pleasure in replying to the request of "O. B." of Prince George Co., Md., in furnishing some information on the subject of seeding wood-lands to blue-grass. Blue-grass, (*Poa pratensis,*) generally called Kentucky blue-grass, is not confined to that State alone, but is indigenous to all parts of the United States that I have visited, except perhaps the extreme southern portions. It is known as June grass, and Spear grass in the Northern States. It seems to be an attendant upon civilization, and springs up spontaneously all over the country where it is cleared. It is the grass that first occupies our yards and lawns where an opportunity is afforded for anything to grow. It grows less luxuriantly on the light thin lands of some sections of the country, but in many portions of the fertile States of the west and northwest it may be made to form a rich, nutritious pasture, and many of the farmers of Ohio, Indiana, Illinois, Missouri, and other Western States, have extensive pastures of it. But upon the deep, rich loamy soils of Central Kentucky which rest upon the fossiliferous limestone which characterizes these portions of that State, it grows with such rich luxuriance as to lead to the impression that it is a variety of grass confined alone to that locality. I regret that I have not the geological reports of Kentucky just now at hand, that I might name the peculiar constituents of those soils, as furnished by that distinguished chemist, Dr. Robert Peter, who labored several years with unexampled industry in analyzing

many hundred specimens of soils, minerals, waters, &c., connected with the geological survey of the State. Potash, however, forms a very important ingredient in the soils of the State. The limestone rocks, abounding in organic remains, crop out in various places on almost every farm, particularly upon southern inclinations, where the long continued action of the frost, sun, and rains, have laid them bare, are undergoing a constant disintegration, and thus contribute to the perpetual enrichment of the soil. It is these peculiarities of the soil of Kentucky that give such luxuriance to the blue-grass. But the fields and wood-lands of other States, if prepared and seeded with care to this grass, will yield rich pasturage, that will be most grateful to the stock of the farm. In England a considerable number of varieties of grass seeds are sown to establish meadows and pastures, but in our country where blue-grass will take a firm foothold, but little else will be permitted to grow.

In establishing woodland pastures, the first thing to be done is to clear off the undergrowth and leaves, and to thin out the least valuable trees, so as to admit a portion of the sunlight to the soil. February is a month of comparative leisure with the farmer, and is the most suitable time to prepare and seed wood-lands to blue-grass. Sometimes, however, the seeding is defered until March or April, but when delayed until the season is too far advanced, the seed is less likely to vegetate, or the young plants, before they secure a firm foothold in the soil, are liable to suffer and die from the heat and drouth of summer. After cutting out and burning all the undergrowth and leaves that lie in the way of the seeds coming in contact with the soil, various methods are employed to loosen the surface and to secure a lodgment to the seed. Sometimes a strong harrow is used, while other farmers make an implement less liable to be broken, by securing an ordinary ox-tongue to a piece of stout oak plank a little diagonally, forming a kind of scraper of the width of an ordinary harrow. This is drawn by a yoke of stout oxen over the surface, which will loosen it sufficiently to receive the seed. Wood-lands generally are so open and light, that seed, if sown at the proper season, seldom fails to grow. The seed should be sown immediately, while the surface is open and loose, when the first rain will sufficiently cover it to secure its vegetation. If sown in February, the action of the snow and frosts render the seeding still more certain. The usual quantity of seed sown to the acre is about one bushel, (fourteen pounds;) some, however, do not sow more than half this quantity, but this is poor economy, because time is lost in waiting for the grass to spread to cover the surface, while other less valuable grasses and weeds will for a time come in and occupy the vacant spaces. In soils where the grass takes with less firmness, it is the more important that a good supply of seed be sown, and I would recommend twenty pounds rather than less. Farmers generally, in Kentucky, sow a less quantity of seed to the acre, of all kinds, than those of the Eastern States. Lands thus sown to blue-grass, should not be pastured until the second year, or until it has gone to seed, otherwise the stock are liable to pull up the plants by the roots.

The seed matures in the latter part of June. When just ripe it is eaten by horses and other farm stock with great relish, and is very fattening. Until within a few years the seed was gathered in large quantities for market by simply stripping the heads by hand, a very slow and tedious process; finally hand combs were made for the purpose, and at a later date combs drawn by horses were introduced. These gather the the seed quite rapidly, but taking with it a large portion of the stems entire. The seed heads are divided and the seed separated, that is "cleaned," by rubbing it by hand through a wire riddle nailed to a frame. In this way ten bushels (140 pounds) are cleaned by one man in a day. The writer designed a machine, run by hand or steam, that cleaned 100 bushels in a day, in a very perfect manner.

In Kentucky the blue grass pastures intended for winter feed, the stock is taken off by mid-summer, and the second growth is permited to stand undisturbed for winter pasturage. If the close of the season is favorable, on good land the blades will grow 12 inches or more in length, forming a thick, deep mat of grass, that remains green through the winter, or until it is eaten off. The grass falls down, forming a protection to itself from the effects of frost. On these pastures stock will keep in good condition in the winter while the grass lasts; being thoroughly matured, it is more nutritious than the early grass of spring.

"O. B." remarks: "Blue grass has been tried here on our fine arable lands, which take readily to timothy, clover, orchard grass, &c., but has *never* succeeded. Will it in woods on virgin soil?" There can hardly be a doubt that if woodlands are prepared for seeding in this way, and at the time herein given, that it will do well in Maryland.

In seeding cleared land to blue grass the operation is always attended with more uncertainty than on woodlands, because the seeds and young plants are more exposed to the drying influences of the sun and winds than upon the light virgin soil of the partially shaded woodlands. To insure a good stand upon old lands early seeding is *indispensable*. The young plants should have as early a start in the spring as possible to enable them to get well rooted before the dry, hot weather of summer sets in. Blue grass seed on open land is generally sown in winter, and on the snow if possible, in fields seeded with winter grain. Or it may be sown on the clean field, and one or two pints of clover to the acre cast separately, because the clover seed being so smooth and heavy it cannot be mixed and cast evenly with the blue grass seed.

Dealers in field seeds generally keep blue grass seed for sale. The price ordinarily is from $1.25 to $1.50 per bushel of 14 pounds, cleaned. Seeds of the previous season's growth should be sown.

Should our Maryland friends make a trial of this grass on lands well prepared, it would be interesting to the general reader to know the result. H. P. B.

Otsego County.—The following officers of the Otsego County Agricultural Society have been elected for 1864:

President—G. Pomeroy Keese, Cooperstown.
Vice-President—Wm. I. Compton, Middlefield.
Secretary—H. M. Hooker, Cooperstown.
Treasurer—F. U. Johnston, Cooperstown.
Directors—Henry Roseboom, John A. Bathbun, Chas. Bates, R. H. Van Rensselaer, James R. Morris, Alfred Clarke.

Sore Eyes.—A little alum boiled in a teacupful of milk, and the curd used as a poultice, is excellent for inflammation of the eyes.

ON THE CULTURE OF TURNIPS.

The question, is it profitable, or does it pay to raise turnips and other roots to feed to farm stock during the season that they are kept on dry fodder, is frequently recurring in our agricultural papers, and I suppose the repeated question is asked by those persons who have just commenced the business of farming, or who have never raised those crops. Now these questions may be answered both affirmatively and negatively, and yet be answered correctly in both cases, for there are a great many farmers who every year raise root crops for feeding purposes, from which they realize a large profit; and on the other hand many attempt to raise these crops, and, for many and different reasons, they get only small and poor crops, which cost them more than the crop is worth.

In deciding upon the value of root crops, as well as all others, many things are to be taken into consideration. In different places there are local causes which will have a bearing on the question, such as the value of the land, the cost of labor, the cost of manure, and whether the labor is performed principally by hand or by the aid of machinery. The *cost* of most crops can be very nearly known if an account of the different items in the expense in raising is made, but the *value* of them for feeding purposes is a much more difficult matter to determine. Where there is a market in which they can be sold, the selling value is known, and from this the feeding value can be estimated near enough as a general rule.

In many parts of the country where roots are raised there is no market in which they can be sold, and the profit or loss in feeding them, depends mainly upon the skill and success with which the crop is raised, and this can only be determined by the experiment. After taking all things into consideration, I am satisfied that where the soil is suitable for root crops it will pay for those who own or cultivate land, and keep horses, cattle or sheep, to raise some kind of roots to feed them with during the winter, or while they are fed on dry feed.

From the first commencement of my labors on the farm I have raised roots of some kind to feed to my stock during the winter. Previous to the time that the potato crop became effected with the *rot*, I raised that crop principally. Since that time I have raised turnips as my main crop for feeding, though I generally have a small patch of carrots every year. I have raised and experimented with nearly all the different kinds of turnips that I could obtain, but for several years past I have raised only the Improved White French turnip. This variety I consider the best for eating, feeding, or keeping, of any kind I have ever raised.

The past season (1863) I raised what I considered a very good crop of turnips. I think it was the most even and uniform crop while growing and when harvested, that I have raised for some time. The land on which the crop was raised was a piece of meadow, on which the grass was badly run out. It was plowed the spring of 1862, a dressing of manure spread on, and cultivated in without disturbing the sod, and planted with potatoes. After the potatoes were dug another dressing of manure was put on and spread, and plowed in. In the spring (1863) just before I wanted to sow my turnips, another light dressing of manure was spread on, and the ground plowed again. It was then harrowed so as to level the furrows, and after this raked with my wire tooth horse-rake until the surface of the ground was smooth, and the soil mellow and fine. The seed was then sown with a seed drill, in rows 30 inches apart. After the plants were up so that the second leaf could be seen plainly, the ground was hoed over and a part of the plants cut up in the rows. After this the ground was hoed over once, and the plants thinned out so as to leave them about one foot apart in the rows. This was all the cultivation this crop received, but I think that I never raised a crop before without hoeing them three times. This crop would have been hoed again had not the very wet weather prevented until the tops were so large that it could not be done.

The turnips were harvested in the following manner: Commencing on one side of the field, with a hoe, the top of the turnip was cut off with a single blow, and then the root pulled out of the ground with the same implement. The turnips were left on the ground until they were dry, when they were picked up, thrown into a cart and drawn to the cellar. The number of bushels harvested was 300. A few days after they were harvested, I weighed a few bushels of them, to see how they would compare in weight with potatoes, and found that they weighed a little over 60 lbs. to the bushel. After this, I measured the land on which the crop grew, and found it to contain 56 rods, a fraction over ¼ of an acre. I kept no account of the expense of raising this crop, for the reason that I made no extra effort, either in the preparation of the land, or in the cultivation of the crop, and the labor spent on it was done part of a day at a time. Yet I think it did cost as much labor to raise it as it did to raise the crop of potatoes on the same ground the year before, which produced only 75 bushels. Some of the turnips were sold at the time they were harvested for 20 cts. per bushel. Since then they have been worth 25 cts., and now I get 34 cts. per bushel, delivered at the village near by.

In connection with the question proposed at the commencement of this article is another, which is often asked, and that is, what effect will it have on the milk of the cow to feed them turnips while they are giving milk? and, also, in what way can turnips be fed to cows giving milk so that the turnip flavor will not be imparted to the milk? These experiments I have tested satisfactorily to my own mind in several instances. This winter I have two heifers which I am milking, and which have been fed with turnips once a day since the first of December to the present time. From the milk of these heifers, two families, consisting of from eight to ten persons, have been supplied with what milk, cream and butter they have used, besides which, a small quantity of butter has been sold, yet in no instance have I known the turnip flavor to be detected by any one, either in the milk, cream or butter. The turnips are fed in the following manner: The person who milks the heifers, when he goes to the barn in the morning, carries a basket of cut turnips, which are equally divided and given to them, and they eat them while he is milking. The basket holds three pecks. Three years ago this winter I fed a new milch cow a half bushel of turnips

each morning through the winter, with the same results as those of this winter.

I would here say the French turnip is a very sweet and mild flavored turnip; whether the strong flavored turnips could be fed in this way without imparting a flavor to the milk, I am unable to say from experience, but I was informed this winter, by a gentleman who has tried the experiment, that he one winter fed his cows with the English flat turnip, in the same manner that I fed mine, and with the same favorable results.

I am acquainted with several gentlemen in Massachusetts who raise large quantities of turnips every year to feed their stock, and they have informed me that they feed them to their milch cows without any inconvenience whatever, though I am unable to say in what particular way they feed them.

For feeding to sheep, and especially to ewes that have lambs, I think the turnip a valuable root. When I do not have turnips enough to feed my sheep all winter, I commence feeding them once a day with turnips about a month before they drop their lambs, and continue to feed in this way till the sheep go to the pasture in the spring. Judging from the appearance of the lambs, the turnips make a large flow of rich milk, and both sheep and lambs do as well as on any feed that I give them. Last fall I boiled equal parts of potatoes and turnips together, and fed them to my hogs. They fed well on them, and appeared to fat as fast on this feed as on clear potatoes. In conclusion, I would say that I think there is nothing more condusive to the health and thrift of our stock through the long and cold winters than a daily feed of some kind of roots. C. T. ALVORD.

Wilmington, Vt., Feb., 1864.

"DOES FARMING PAY?"

This question has been agitated by many correspondents of the COUNTRY GENTLEMAN, as well as the kindred one, "How to buy a farm?"

Hitherto the discussion of these questions has been confined to eastern writers. That the West may be heard from, permit me to tell you how a Buckeye Boy (a neighbor of mine) bought a good farm, and then made it pay.

Mr. ELIAS SIMPSON was married in 1842—the only heritage possessed by himself and wife, were strong hands and willing hearts. Mr. Simpson had no advantages from education, but he has a good mind and sound judgment. When married, he took a lease which he worked for three years. When this expired, he rented ground for three years, and had now gained sufficient property to take in 1848, a lease upon one hundred acres of Scioto bottom. This he cleared, fenced, and farmed, making more or less money each year until, on the expiration of his lease in 1854, he bought the farm he had improved. This was soon paid for, and another hundred acres of improved Scioto bottom was added to his farm.

The history of each succeeding year would but be a rehearsal of the above. His farm last year (1863) consisted of about 650 acres, well improved good fertile land, embracing corn and wheat lands, meadow and pastures.

This spring Mr. Simpson has purchased, adjoining him, 200 acres of bottom and 100 acres of upland at a cost of $28,000, on which he paid down $14,000, this being less than his profits for 1863.

Thus he married in 1842, without a dollar, and the spring of 1864 finds him worth it least $100,000. In this there has been no speculation, but it is all the result of hard labor and good management.

"Does farming pay?" Undoubtedly it does in Ohio, and if any unbelievers are to be found, let them come and see. BUCKEYE.

Southern Ohio.

"Domestic Guano" on Corn—How to Prepare and Use it.

In your paper of the 3d March your correspondent, E. R. Towle, relates his experience with "domestic guano," and announces that, with him, it was a failure. I am not surprised that it was, as, according to my experience, he erred: 1st, in composting his hen manure with ashes, even though leached, as the alkali—and he cannot remove it all by leaching—sets free the ammonia of the manure. The insoluble constituents remaining in leached ashes are valuable as manure, but not enough so to compensate for the loss of ammonia, caused by the alkali. He should have mixed his hen manure with muck or soil. 2d, he put too much in the hill. This might have been remedied by mixing it freely with the soil when deposited in the hill.

I experimented last year by mixing an equal quantity of good soil with hen manure, moistening it with liquid manure from the barn-yard, adding a small quantity of plaster, letting it remain until a very mild heat was generated, then forked it over, added more plaster to fix the ammonia, reduced it to as fine a condition as possible, and applied a small handful to each hill, mixing it with the soil as I dropped it, and was well satisfied with the result. That portion manured with a single handful of the compost was better than that manured with plaster, very much better than that not manured, and quite as good as that manured with a double handful where it was mixed with the soil in the hill—while the seed did not half come up where it was dropped directly in the compost. I would not have wet the compost had the hen manure been pulverized, or in a state in which it could have been; but straw and fine hay had got mingled with it, and it was a hard, compact mass.

The rules I would lay down in preparing and using hen manure, are these:

1st. Do not compost it with lime, ashes, or other alkali, as it will set free the ammonia.

2d. Mix it weekly in the hen roost with at least its bulk of fine muck or soil, adding plaster if convenient. These substances will fix the ammonia, and reduce it to a less concentrated form. Pulverize before using.

3d. Never let it come directly in contact with any seed, as it will destroy the power of germination, and it is far better for the fine young roots that it should be mixed with the soil for quite a space around the hill, and thus supplying them for a longer period. My experience is that corn planted in a compost of hen manure and soil, half and half, will never come up, while, if mixed well in the hill, it will do much good in bringing forward the crop in its earliest stages, frequently making it ten days earlier and something heavier. Prepared and used as I have directed, I fully believe it will add a bushel of corn to the crop to every bushel of hen manure used up to five or six per acre, to say nothing of its being earlier, which is the greatest consideration. S. B. ELLIOTT.

Oak Tree Farm, near Mansfield, Pa.

MANURE QUESTION.

We do not know but our readers, those residing in the West particularly, are ready to accuse us of harping too much "on a single string,"—of keeping too constantly in the foreground, and too often expatiating on the importance of, the *Manure Question*. But observation among our farmers, not less than the study of foreign agriculture, impresses us deeply with the immense importance of the subject, and with the fact that, say what we will, its real prominence is not yet appreciated among us;—and, at the risk of repetition, whether inadvertently or "of malice aforethought," we find it continually rising up, while we read or while we write—overshadowing all minor topics, and claiming, as of right, to be heard and discussed again and again.

The uses and value of the clover crop as a fertilizer, are treated at length in other columns of the present number, and we need only refer to the article itself to insure for it the careful perusal of the reader. But there are few farmers so situated that the manure of the Barn-yard is not their main dependance—without it, in many cases, a satisfactory clover crop cannot be grown; and, as all our old subscribers are aware, we have repeatedly urged the Winter Feeding of stock for the express purpose of making manure, altogether aside from whatever other profit it might involve.

An unexpected confirmation of the arguments in favor of this policy reaches us in a work, the advance sheets of which were referred to in our last—"Ten Acres Enough." In advising the winter-feeding of cattle, for the farmer, we might have hesitated about the application of the advice in the management of an area of such limited extent; but here we have a case in which it has been literally followed, for a series of years, with careful scrutiny of charge and income, and with returns throughout of a most satisfactory kind. We note this instance particularly, because it is, so far as we remember, the first that has come to the knowledge of the writer, on what we might term a fruit garden rather than a farm, and because, as the author of the very interesting work before us takes care to state, his entering upon the practice was the direct result of his agricultural reading.

Our limits will not admit a full detail of the circumstances of the case, for which we must refer to the book itself. Suffice it to say that by careful attention, combined with liberal manuring, the ten acres—six of which were in strawberries, and the remainder in other small fruits and in vegetables—were made to yield a profit above all expense, the third year from the beginning of the experiment, of $130 per acre. This was accomplished, then and in succeeding years, at a cash outlay of from $250 to $350 per year for manures from the city, beside the careful husbanding of every thing about the place, including the products of a horse and cow, the fallen leaves gathered from the roadsides around, and in fact all that could contribute to the resources of the barn-yard—in which economy of fertilizing material alone, the example is worthy of study and imitation. But after several years' experience in this way, the question arose whether the money paid out could not be partly or wholly saved? The author concluded to try the experiment. He put up a rough shed, large enough for twenty cows, and a simple steaming apparatus, a description of which we should be glad to receive for the benefit of our readers. In October and November he purchased twenty heifers which were to calve in the spring. He bought a lot of cornstalks of his neighbors—twenty acres at $3 an acre. The first year's account stood as follows:

Cost of 20 heifers,	$440.00
Cornstalks,	60.00
Other food—(averaging 140 days each cow at 6 cts. per day,)	168.00
Extra wages of hired man for attendance, per agreement,	40.00
Total cost,	$708.00

They were sold in spring at an average price of $35.50, or $710 for the whole—thus returning all the money expended, "besides having a great quantity of cornstalks left over," continues the author, "and a pile of manure certainly as ample as any for which I had paid $250. Moreover it was on my own premises; it had been most carefully attended to during the whole process of manufacture; I knew what it was composed of, and that the seeds of noxious weeds could not have been added to it. The result was so encouraging that I have continued the practice of thus feeding cattle during the winter from that day to this, increasing the number, however, to twenty-five. On a run of 4 years there has been no profit beyond the manure; but that much is all clear. Thus the winter, instead of being a season of suspended profits as formerly, is now one of positive gain."

Certainly $250 is a considerable sum to add, at a single stroke, to the annual profit of a ten-acre farm; and it is the same principle here involved which applies in nearly as great degree to all our farming. And taking particularly the farms of those who live near cities, as on Long Island for example—the complaint is a common one that the manure purchased from city stables and other sources, is high in price, for "loads" of wonderfully small capacity; likely to be full of weed seeds, and, more than all, that from constant exposure and handling in all sorts of weather, it is vastly diluted in real fertilizing value. Yet how few have tried the simple expedient here described, or some similar method of home-manufacture!

The space is not now at command to follow up the subject as it deserves. Great as has been the progress already effected by many of our best farmers, in devoting attention to such means of securing good and abundant supplies of manure, we cannot hope for the general and fundamental improvement of our agriculture in the Eastern States, until the fact becomes universally recognized here, as it has long been in England, that the manufacture of good manure in winter is just as indispensable a part of farming, as plowing is in spring or harvesting grass and grain in summer. Without going quite as far as the author of the present treatise, and asserting that "the real office of the ground is *merely to hold the plant in an erect position while you feed the roots*," we cannot but admit that his practice is strongly in support of his theory, while the latter conveys an important lesson, and, unlike many other theories, is in little danger of ever being carried to an injurious extreme.

Dried Apples.—Wm. H. Rogers, of Williamson, Wayne county, N. Y., made 7,000 pounds of dried apples out of the crop of 1863, which he sold at 10 cents per pound, making more money for that one article than is realized by many farmers for all their saleable products.

MATERIALS FOR BEE-HIVES.

MESSRS. EDITORS—In a recent number of your paper I made some remarks respecting bee-hives and bee culture, in which I said that the only real improvement in the *arrangement* of hives, during a century or more is that of the Rev. Mr. Langstroth, to wit, the movable comb arrangement.

In this I propose to speak of *materials* for bee-hives, and would remark here that the only improvement *ever* made as to the use of materials in the construction of hives is that of Mr. Samuel Ide, the skilfull and worthy inventor of the "straw lined hive." This improvement is applicable to any hive, no matter what may be its internal arrangement. We, however, prefer and have adopted Mr. Ide's arrangement in connection with his double or straw lined walls. In cold climates it is a consideration of no small importance *how* and what of kind of materials the walls of bee-hives are constructed. Walls made wholly of straw could not afford as good protection against piercing winds as one of wood, on account of the density of the latter. Again, the straw cannot be wrought into the desired forms.

Walls of bee-hives formed of dense material like that of wood or metal are highly advantageous in some respects, but the quality of being dense renders such material very disadvantageous in other important respects, for the reason that the more dense any substance is, the more variable it is in temperature, readily changing with the atmosphere from one extreme to the other, because such bodies are good "conductors" of heat and cold. Hence walls of metal, stone and even hard wood naked on the inner side are decidedly objectionable for bee-hives, in that such walls quickly absorb or conduct away the caloric out of the air which the bees may have rarified within the hive; besides dense naked walls radiate inward the same temperature which such dense bodies maintain in the external atmosphere, whether it be heat or cold.

On the contrary, straw being porous, and like some textile substances, (wool for instance,) is in a high degree a non-conductor of heat and cold, and therefore superlatively superior to dense bodies for enclosing bees in during all seasons of the year, as it enables them to maintain a more even temperature at all times, which is so essential for securing to them a continual prosperous condition. The soft and lighter kinds of wood are the most suitable for making bee-hives, even if they are to be lined with straw. Soft pine boards that have been kiln dried or used in old ceilings, are preferable to newly cut timber. The longer and harder the boards have been *baked*, the better they keep their place, and they are thus rendered more non-conducting. Mr. Ide's hive is made with an upper and lower section. The top wall of the lower section is made mostly of straw, and movable; it is designed to be put on in the early part of winter and removed in the spring before they commence gathering bee-glue. In this way it is kept free from glue or wax, and it will not condense but little of the internal humid air during winter, and that little will readily be absorbed; the shell of the upper section remains on all the time, and when the surplus honey boxes are inverted they form the "top" of the lower section, the only section that requires to be lined, which lining is put on in a manner similar to the "lath and plaster" wall of a house, and which is many times more advantageous relatively in the *hive* than in the house. Some of those advantages are apparent even to those who do not observe these matters; others will be pointed out in a future communcation.

Richford, N. Y. C. J. ROBINSON.

Innocence is as meek as a child, but often mightier than any giant.

THE YELLOW GLOBE MANGOLD.

EDS. COUNTRY GENTLEMAN—The article in your No. for April 7, on the culture of of turnips for stock-feeding, cannot fail to be interesting and instructive to those whose attention has not hitherto been directed to that subject. But more light is required. Experience proves that while turnips are good, something else is better. The Globe Yellow Mangold I have long since proved to be incomparably superior. For milch cows it has no equal. It is more easily cultivated, produces a much larger crop, keeps better, and to cover all, imparts no unpleasant flavor to the milk.

With all deference to your Vermont correspondent, I must be permitted to say that I detect the flavor of turnips always in milk and butter—not excepting the French White. The long Red Mangold I abandoned, because of an earthy beet-root flavor quite apparent in the milk, which was also of impoverished quality. On the contrary, the Globe Yellow Mangold, possessing largely of saccharine, enriches the milk, and imparts a fine color to it. Carrots do the same, but are better for horses than cows. This winter the butter on my table has been far superior to the average I meet with elsewhere, where there is no excuse for inferior quality. The roots are cut and fed morning and night—adding some salt twice a week.

Whilst turnips are a precarious crop, the Globe Mangold need never miss. I have grown it most successfully both on the heaviest and the most sandy of soils. It does best on a clayey loam, but a fair crop can be raised even on the sandy barrens of Long Island, with the addition of well-rotted stable manure. On good soil I have raised Globe Mangolds weighing 14 lbs., round, smooth and solid—not single specimens, but lots of them—ranging from 4 to 8 lbs. as the rule.

On the thin soils of the Hudson we are content with smaller dimensions, but the quality is excellent. Last year we had a liberal supply up to 1st of June—solid, crisp and sound as when first placed in winter quarters, which is out of doors, no matter how exposed, provided the bottom is dry and the pile is well covered with straw and soil.

The Globe Mangold must be sown early in May and cultivated in the same manner as turnips, which it much resembles, growing as they do on the surface. Each capsule produces several plants, so that if there are any blanks, they can be filled by transplanting in showery weather, taking care not to insert too deeply, or else the plant will not bulb. The best seed is imported, being raised on the Island of Guernsey, on the coast of England.

Scarbro'. J. C. J.

GAPES IN CHICKENS.

This is almost a universal complaint among chicken-growers. To prevent it, never feed fresh mixed or raw Indian meal. I raise from 200 to 300 chickens every season, and never have had a case of "Gapes." To young chicks let the standing dish be wheat or wheat screenings, or finely cracked corn—this should always be within their reach; their feed, stale wheat bread, soaked in milk or water, three or four times a day.

If *corn meal* is used it must be scalded, and may be fed warm, but *not hot*. Give plenty of clean water in shallow dishes, or put stones in deep dishes or tubs, so they cannot drown.

Place them so they can get either sun or shade, as they require—don't cook them alive in the hot summer's sun, and 95 out of every 100 chicks will come to maturity.

Tompkinsville, N. Y. J. C. THOMPSON.

Dent Corn in Northern Ohio and New-England.

MESSRS. L. TUCKER & SON—Some time ago I noticed an inquiry as to whether the Dent corn, or Gourd seed corn, would ripen in Salisbury, Conn., and an answer from some one near Columbus, stating that he believed it did not succeed well in the northern part of the State. Being a native of Litchfield Co., and having lived twenty years in Ohio, perhaps I can give an answer.

I live in Portage county, which corresponds with Fairfield in latitude. Very little other corn is raised here, and I have known it to be injured by the frost in autumn but once. It is raised in Cuyahoga and Lake counties, and I think also in Ashtabula, which is the northern extremity of the State. We are more exposed to late and early frosts, and lose our fruit much more frequently than in Cornwall, Conn.

Still there are peculiarities in this corn, and in our climate, which adapt the one to the other, which might not be true in Salisbury. The corn starts more slowly in spring than "Yankee corn," but it ripens most quickly. At rye harvest the Yankee corn will seem to be much the most forward.

In Southern Ohio the corn grows larger and a longer time, but I think their corn will suffer from early frost as often as ours.

The corn will adapt itself to the season much better than ordinary New-England corn. It fills out the season by a larger growth at the South, while it hastens to ripen at the North. But the peculiarity of climate to which I alluded, is the fact that we have very dry weather the last part of July and through the whole month of August. This hastens the ripening of the corn to such an extent that the Dutton corn seems only to be blisters on the outside of an immense cob. I think that the greater moisture of the Litchfield county climate, would give a large growth, but endanger the ripening of the ears. I think the experiment should be tried on a small scale at first. If your correspondent will send to J. Stair & Son, seedsmen, in Cleveland, for red cob Dent corn raised in Northern Ohio, he will be able to try the experiment fairly.

One circumstance will have an influence on the profits. The Dent corn does not sucker; the stalk is larger, longer, and has fewer leaves; consequently is less valuable as a forage crop than Eastern corn. H. C. J.

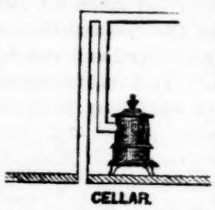
SETTING FENCE POSTS.

I will give you my experience in setting fence posts in wet clay land, liable to heave with the frost. In the first place dig the holes about two feet deep, then make a hole with a bar, sharpen the post and bore a two inch augur hole through the post where you commenced to taper the point, and put in a good heart cedar pin so as to project about six inches each side of the post, which will last as long as the post. Then drive the post with a beetle the depth of the point which will be a foot or 18 inches, making the whole depth from 3 to 3½ feet. Then place a large stone on the pin each side of the post. Then ram the earth firmly above as the hole is filled. Then plow two or three furrows on each side of the fence, and bank it up about six inches; that will carry the water off, which is necessary to prevent heaving. Where this banking is done, horses or cattle are not so apt to trouble the fence. This fence can be built without much extra labor. I adopted this plan two years ago, and can assure you that it will never heave.

CHAS. A. VAN VALKENBURGH.

VENTILATING CELLARS.

Every one is aware, on a moment's reflection, of the importance of ventilating cellars—as foul air is not only detrimental to health, but is detrimental, or taints, everything within its reach. During the warm part of the year, partial ventilation may be effected by opening opposite windows, but too much fresh air may render the cellar warm. One of the best contrivances, especially for winter, is to affix a branch-pipe to the stove-pipe in the room above, for this purpose—as shown in the annexed figure. The pipe passing up to some height above the stove before joining, does not materially affect the draft; and all difficulty of this kind will be prevented by placing a valve at the floor, to be shut while the fire is kindled, or to be partly closed if too much air passes from the celler, causing a cold draught from the exterior crevices. As foul air generally rises to the upper part of the cellar, it is drawn off in this way as fast as it accumulates, and the apartment kept pure.



[For the Country Gentleman and Cultivator.]

How to Treat the Whooping-Cough.

Upon the first intimation of the cough commencing, take equal parts of good old spirits, (rum, brandy or rye whiskey,) and sweet oil; at bed-time, place the child with the back to the fire, and rub the spine with this mixture from the neck down. Let the rubbing be done thoroughly every night, and neither the mother or child will suffer any inconvenience from this often distressing complaint. The disease will run its course, but it will be in so mild a form that the most delicate child will pass through it in safety.

My experience is that it is important to commence the treatment at the first appearance of the cough.

BUCKEYE.

To Drive out the Crick and Pains in the Loins of the Back.

At intervals during several years I was much afflicted with a crick and pains in the back, so severe at times as to be confined for days, and even weeks. Tried many expedients, but found no effectual remedy until a bachelor friend in Chicago recommended the construction of a belt to button pretty tight around the waist. The inner lining, next to the skin, is wool flannel, the outer, strong cotton. Between these linings several layers of padding of common cotton batting are placed, which extends from hip to hip, half way around the body. The upper edge of the belt should be straight; the lower edge cut on a circle, that is, the back part about seven inches wide, and the front five inches.

I applied the belt while the crick was on, which drove it off the same hour, and have not been troubled an hour since with the excruciating pain, having worn a belt most of the time since.

Immediate relief has been performed upon other persons by the same process.

Many afflicted persons may thank the COUNTRY GENTLEMAN for this prescription. S. W. JEWETT.

Delaware Grape under Glass.—S. H. Ainsworth of West Bloomfield, N. Y., stated in his address before the late meeting of the Fruit Growers' Society at Rochester, that he had fruited the Delaware grape for two years in his grape-house, and has found it much superior in quality to the same variety grown in open air—better even than the Frontignans and the Muscat of Alexandria. He regards it as a great acquisition for house culture.

Flax and Barley Grown Together.

Some time ago I wrote an article which was published, giving the result of my experiment last summer in growing flax and barley together, which proved to be a profitable crop owing to the high price flax seed now commands, and believing, as I do, that it did not in this instance lessen the amount of barley; yet I do not think it advisable for farmers to grow a mixed crop unless their soil is in a high state of cultivation, and then one kind sown generally exhausts the fertility quite soon enough. In answer to the inquiries of Mr. WINSPEAR in Co. GENT. of recent date, the soil on which this crop was grown is a light gravelly loam, on which the year previous was a crop of corn. The soil was well cultivated, and the barley and flax was sown the last week in April, and harvested the last of July with the cradle, and bound into sheaves in the same manner as though the barley had been grown alone. It was thrashed by a machine without any trouble; only thrash it slow, and see that the flax seed is not blown over with the chaff. The straw was eaten greedily by my steers early in the winter, relishing it seemingly as well as though it was barley straw alone. In regard to seeding down with this crop, I have had personally no experience, but the result with one of my neighbors was a good "catch," and I know nothing to the contrary why it will not do as well as with any other spring grain, for on soils liable to heave out clover by frosts, flax is one of the best grains to seed in, for it is a crop that leaves the ground in a very firm condition. The barley sown was the 4-rowed.

Newfane, N. Y. JAMES McCOLLUM.

REMEDY FOR BOTTS.

When a horse is attacked with botts, drench with equal quantities of sweet milk and molasses, warm. In ten or fifteen minutes give one quart of strong sage tea. It is seldom the second dose will be required.

BUCKEYE.

HOW I RAISE CALVES.

MESSRS. EDITORS—As I have seen some inquiry about raising calves, I will tell you, through the Co. GENT., that the way I raise my calves is to not let them suck at all, but feed them as soon as they can stand—feed them new milk until three or four weeks old, say from three to four quarts per day, morning and evening—then up to two months old give them skim-milk from eight to twelve quarts daily until the milk begins to fail—then mix about one pint of oatmeal with some milk as long as I have it—give some sulphur once a week, about a tablespoonful. I feed some meal all winter, and a few roots.

I have never lost any calves managed in this way. I have raised some that got the first premium in this place at our fair. I have one at this time that will weigh seven hundred pounds, and got the second premium at the County fair last fall. He will be one year old the 5th of April—is a grade Durham. I keep them tied around the neck in winter—feed in a high manger; it will make them hold up their heads when they are out of the stable and give them a better appearance. I think people spoil some fine calves by trying to make them grow too fast. If fed as above, they will have a good appetite and never get cloyed. Calves raised in this way hold their shape and will be of a nice size. I have never lost any with the murrain since I practiced the above method. I would like to hear from some experienced one through your Co. GENT.

Cortland Co., N. Y. SYLVESTER R. WOODS.

THE WAY TO MAKE LACQUER.

One of your correspondents, C. B., inquires for a recipe for making lacquer, or liquid drier. We herewith furnish two recipes for this purpose, and he can he can choose either, as they are both good:

Take 1 pound of good litharge, 1 pound of red lead, ¼ pound of umber, that has been well pulverized, ¼ pound of sugar lead, 1 gallon of linseed raw oil, and put them all in an iron kettle, and boil them slowly over a gentle fire for three hours, and stir the ingredients every few minutes while they are boiling.

It is very important to have a steady fire, just such a fire as we make when making sugar. If the fire flashes up and burns furiously for a few minutes, there will be danger of burning the lacquer, and thus spoiling the whole of it.

After it has boiled enough, let it cool in the kettle, and when it is about cool enough, so that it will not burn your finger, add 1 gallon of spirits of turpentine, and stir it well. If it appears too thick, add more turpentine.

As turpentine is now very costly, use the same quantity of benzine instead of turpentine.

Recipe 2d for Making Lacquer.

To 1 gallon of raw linseed oil add 1 pound of gum shellac, half a pound of litharge, 4 ounces of the best red lead, 6 ounces of sugar lead, and half a pound of burnt Turkey umber. Prepare a good bed of live coals of hard wood, and make a steady fire; and when the oil begins to boil, let all the above named ingredients be put in and stirred frequently, to prevent burning. The fire should not be allowed to blaze up very much on the sides of the kettle. Let it boil gently for two and a half or three hours. It will be necessary sometimes to boil it slowly for four hours. It is always much better to boil it gently for four hours than to boil it very fast for two or more hours. When it is partly cool, thin it with half a gallon, or more, of benzine. All these ingredients may be obtained at the drug store.

Any one who has judgment enough to boil oil well can make good lacquer much cheaper than it can be bought at stores ready made.

Auburn, N. Y. S. EDWARDS TODD.

NEAT'S FOOT OIL.

"H. K." in Co. GENT. of March 31st, asks, "what is Neat's Foot Oil, and how is it made?"

Neat's Foot Oil was originally made by boiling cattle's feet and legs and separating the oil from the mass, by skimming it from the surface of the water. It is now more extensively made, or, what is essentially the same thing, by separating the oil from beef tallow, by pressing, as lard oil is separated from lard.

Nearly forty years ago, Samuel Judd, then a great oil merchant of New-York City, advertised large quantities of Neat's Foot Oil. It was then a matter of surprise to those not familiar with the treatment of tallow, where Mr. Judd obtained so much Neat's Foot Oil. It is now extensively manufactured in the oil and candle factories in most large cities. H.

MESSRS. EDITORS—I notice on page 208, an inquiry from H. K. about "Neat's Foot Oil." In answer—it is manufactured from cattle's feet. The skin and sinews are taken off, leaving the shin bone and hoof. They are then closely packed in tanks, and slowly boiled, either with the aid of steam or over a fire. Steam is best, as they can be boiled more steadily. In making good oil great attention is given not to boil too hard, as it thickens and wastes by mixture with the water, and will not easily separate after. W. D. H.

HORTICULTURAL NOTES.

THE BELLE LUCRATIVE PEAR.—At the recent meeting of the Fruit Grower's Society at Rochester, a large number of the most experienced members present gave their opinion of this fine pear. From general experience it appears to be variable, but uniformly excellent when well grown and well thinned on the tree. It succeeds both as a dwarf and standard, but the fruit is rather best on the dwarfs, although they are not long lived trees. Being extremely fine and delicate in its texture and flavor, it will not bear carriage to market so well as most other sorts, and decays more quickly, and sometimes rots at the core.

PROFITABLE CROP OF APPLES.—The Genesee Farmer states that an orchardist in Western New-York sold from his trees 11,000 barrels of apples, mostly Baldwins, and that the whole amount of the sales was probably about $15,000. If the trees averaged three barrels each, there must have been at least 100 acres of orchard, and there is no question that they received good attention and cultivation, and that the marketing was well managed.

VARIETIES RUNNING OUT.—Dr. Underhill stated at the Fruit Grower's Meeting in New-York city, in reply to the opinion advanced that varieties of fruit would run out as they became old, that seven or eight years ago his trees of tke Newtown Pippin, in common with those of many others, began to decline, and that this was attributed to the old age of the variety. By enriching the soil, however, with liquid manure, and giving proper cultivation, the vigor of the trees was restored, and they now bear as finely and as good fruit as ever.

ISABELLA GRAPE.—Dr. Underhill stated, at the same meeting, that the Isabella grapevine was often greatly iujured by being allowed to overbear, and that, as a general rule, not more than one-fifth of the fruit which sets should be allowed to remain and ripen.

SUCCESSFUL APPLE ORCHARD.—A Connecticut correspondent of the Rural New-Yorker states that he planted 150 apple trees in the spring of 1859. The ground has been occupied with hoed crops ever since —now five years. These crops suffered no diminution at first from the trees, but they are now beginning to shade them. The average circumference of the trees two feet from the ground, is over a foot, and the diameter of the heads is 6 to 12 feet. Each succeeding year has given three times as many apples as the preceding one, and nearly the same increase is expected for some years to come. This is certainly very good success, and shows the superiority of good cultivation over neglect. An interesting fact is stated worthy of notice by all who desire to purchase big trees, viz., most of the trees were 3 years of age when set out, but those which were older and larger are not now equal to them in size. So much for the check in growth given by the removal of the larger trees.

APPLE BARRELS.—Packers assert that second-hand flour barrels are the worst that can be employed for this purpose, unless every particle of flour has been first thoroughly brushed from them. For the jolting of the carts, wagons, and rail-cars is sure to loosen and scatter the flour over the surface of the fruit, where it forms a paste with the perspiration on the skin, spoiling its appearance and causing mold and decay.

Underdraining a Remedy for Wire Worms.

MESSRS. EDITORS—I have been much pleased with the communication of C. T. ALVORD about the wire worm, published in your valuable paper. He evidently speaks from experience, and feels what he writes.

I too have suffered from the depredations of the wire worm, but only on the moist meadows, and from experience with several crops of Indian corn, can say that underdraining the ground is a complete preventive, if it is done thoroughly. And in reviewing my experience for a number of years, can say that I have never suffered from this worm, except in those parts of fields that do not get warmed up promptly at the commencement of warm weather.

I have been spending some money this spring in underdraining, hoping, through this means, to avoid the wire worm, for one thing, besides increasing the quality and quantity of all crops, and cheapening the tillage, &c. I am strengthened in the faith that this view is correct by the observations of Mr. Alvord, that he suffers only when the ground is cold.

Therefore, from his observation, combined with my own, can say that a good application of green unfermented manure, and plenty of underdrains, well placed in the ground, will do away with any loss from the depredations of this worm. And also if, on any piece of land, the wire worm does much injury, it is a token that it needs the underdrains for other things besides the worms. JAMES A. FENWICK.

New Lisbon, March, 1864.

Culture of the New Rochelle Blackberry.

MESSRS. EDITORS—I have had some practice in cultivating the Lawton blackberry, and latterly my success has been quite satisfactory. At first I procured some canes with roots, and planted them too close together, and supposing them to be hardy, like the common field blackberry, left them in winter to take care of themselves. The consequence was that I grew bushes in summer to be nearly all killed in winter. This I concluded "wouldn't pay." I then changed my mode of planting. I also applied a covering of earth as a winter protection. This I find to be safe, and in the following manner simply done.

Have the surface of the ground smooth, the rows 6 feet apart. Plant pieces of root 6 or 8 inches in length, (half that length will answer,) one piece in a place, 2 feet apart in the rows. They require the first season no care, except cultivating the ground so as to kill the weeds. The bushes may ramble over the ground. The following spring the larger canes, if alive, may be trimmed and supported by suitable stakes. They will bear some small fruit. The other canes may be cut away. When new canes appear where wanted, and attain 1 foot in height, place stakes by their sides 5 or 6 feet above the ground, and as stiff as bean poles, and tie the canes as they grow to the stakes by 4 or 5 ties, so that they may not be broken by the winds. At the approach of winter remove the stakes and lay the bushes at right angles from the rows, flat on the ground, and cover them 2 or 3 inches deep with earth as follows: Cut off the limbs within 1½ inches of the canes, at the right and left hand sides of the row, making flat bushes. "Shorten in" the remaining limbs by cutting off the slender ends; then, with a

digging or dung fork, loosen the earth about the roots, and remove some, laying the roots loose on *one side*, so that in laying down the roots shall be bent instead of the canes being broken. When laid down use bricks to hold them down while covering, and remove the bricks when in the way. The bushes should be raised up and the stakes replaced as early in the spring as the frost is out of the ground, which can be easily done with a fork if the rows are laid down singly instead of lapping over one another.

Bethlehem, N. Y. AMOS FISH.

HOW TO OBTAIN NEAT'S FOOT OIL.

One of your inquirers, H. K., has asked what neat's foot oil is, and how it is made?

Neat's foot oil is extracted from the feet and bones of the legs of neat cattle. Hence the name which it has received. NEAT signifies "cattle of the bovine genus, as oxen, bullocks and cows."

The process of obtaining this kind of oil is very simple, and many farmers often throw away enough feet annually, to furnish oil enough to keep all their harness, shoes, and leather machine belts in the best condition.

By breaking a bone of a leg of a fat bullock or cow, it will be found full of an oily substance, which ofen appears as rich and edible as a roll of excellent butter. This is neat's foot oil, and it is sometimes surprising to see how much a single foot and leg will yield when it is properly treated.

In order to extract the oil, wash the hoofs clean—then break up the shin bones, the finer the better, and cut the hoofs and bones of the feet into small pieces. Then put them in a kettle of any kind, and pour in water enough to cover the bones. The kettle should never be filled so full that the water will boil over the top of it. The finer the bones are broken, or cut, or sawed, the sooner the oil will be driven out.

Now, let the kettle be covered as tightly with a lid as it can be conveniently, and boil the bones thoroughly all day. Of course it will be understood that more water must be poured into the kettle as it evaporates.

The object of covering the kettle with a close lid, is to retain the heat as much as possible, and thus expel the oil from the bones. The hot water and steam will liquify the oil, and expel it from the bones, when it will immediately rise to the surface of the water. Therefore it is very important that the water should not be allowed to evaporate so low that the oil that has risen to the surface of the water should come in contact with the dry hoofs and bones, as much of it will be absorbed by them, and will be lost, unless it be again expelled by boiling.

When there appears to be oil enough on the surface of the water, pour in a pailful or two of cold water to stop the boiling, or let the fire burn down. Now dip off the oil into some clean vessel, and boil them again until there is oil enough to be dipped off again.

The oil that is obtained by the first boiling is much purer than that which is obtained at the second or third boiling.

There will now be some water among the oil which must be evaporated; therefore, put the oil in a clean kettle and heat it just hot enough to evaporate the water, and the oil will be ready for use. Great care must be exercised in heating the oil, so as not to burn it. As soon as the oil begins to simmer a little, the oil may be removed from the fire, as the water has evaporated. Water among oil heated to the boiling point, will be converted into steam almost instantaneously, as may be seen by allowing a few drops to fall into boiling oil or hot lard.

Let the oil be kept in a jug corked tightly, and it will be ready for use at any time for years to come. In very cold weather, however, it may require a little warming before using it. S. EDWARDS TODD.

How to Make Hair Dressing.

Cut up or saw up the large clean bones of either horses or bullocks, and boil them to expel the oil, as directed above; and if the oil is not perfectly clean, let it be strained and bottled. Mingle bergamot or any other perfumery with it, to suit the taste or smell, and we may challenge the world with all their ambolines, zylobalsamums, and other hair invigorators, to produce anything equal to this home-made hair-dressing. While most of the nostrums of the drug store are really injurious both to the hair and to the skin, this will keep it soft and glossy, and as slick as the fur of a licked kitten. This is no patent humbug, as I can testify from experience.

S. EDWARDS TODD.

Feeding and Produce of Milch Cows.

MESSRS. EDITORS—On page 226 of the present volume, I noticed an article written by Mr. AMOS FISH, on wintering cows. He says: I wish Mr. W. would tell us what he feeds his cows with—also how many of his cows will give 60 lbs. of milk per day, and for what length of time they will continue such flow. I feed early cut timothy and clover, with some roots, cut fine and steamed, from six to ten quarts per day, until grass. In the latter part of the season I feed sowed corn, which makes them hold to their milk, and improves the quality. Full one-half of my cows will give 60 lbs. in the best part of the season, if fed as above. I keep salt under cover in a trough the year round, so my cows have free access to it. Now Mr. F. can see how often I salt in summer time.

I see it stated, also, by Mr. F., that one cubic foot of water weighs 62½ lbs. avoirdupois, and one cubic foot of milk 30 ounces more. I wish Mr. F. would weigh one cubic foot of water and the same of milk, and report. One gallon of milk, at our cheese factory, weighs 10 lbs. beer measure—a gallon of water 8 ounces more. SYLVESTER R. WOODS.

Cortland, N. Y.

A Cure for Hoven or Wind Colic.

Last fall when making Sorghum Syrup, I threw the skimmings from the evaporator to my hogs. My milch cows being in the yard, they ate freely of it; in less than half an hour I noticed one of my cows swollen to such an extent that death must have ensued had she not got immediate relief. I knew not what to do for her, but necessity, as the old adage goes, is the mother of invention. I reflected for a few moments what was the cause of her complaint. I knew in a minute that it must be fermentation of the skimmings in the stomach. I was using at the time bi-sulphate of lime to arrest fermentation in the juice of the cane previous to boiling. I thought I would try it for the same purpose in the cow. At a venture I drenched her with about a gill of the lime; the result was that in ten minutes she was better, and in half an hour she was perfectly well. I have no doubt but that it would be equally good in case of wind colic in horses, or hoven in cattle, from eating green clover.

Columbus, Ohio. GEO. E. GILL.

The only fame worth possessing is the good opinion of the good and wise

Successful Experience in Poultry Keeping.

MESSRS. EDITORS—A few lines on the care of poultry. First of hens. In order to have hens lay well, one must first take great care in selecting the breed. As far as my experience of more than ten years, I found that a cross of the White Faced Black Spanish and the Leghorn, make the best layers of any kind. They were crossed in this wise: a pure Leghorn cock and pure Spanish hens; most of the chicks from this cross are of a beautiful dark gray, some are black, all with large combs and wattles, like the Spanish. I have sixteen of these in one apartment of my hennery; they have averaged over a dozen eggs a day for the last two months, and are still laying at the same rate. My hennery is built as follows:

I have a long woodshed built in old times, about sixty feet long; I partitioned off twelve feet on the east end, with a south front, the north being a bank wall. I also use the second story—about twenty feet of it—for the same purpose, last fall putting about one hundred chickens into it, to fatten for sale during the winter; the third story is used for setting hens. I have used this building for nearly three years; have used no whitewash or any substitute, yet my hens are all healthy and free from lice. I hang all the roosts upon wires, making them fast by carrying wires to the sides at each end, at an angle of about forty-five degrees, to a nail on a floor joice over head. I clean out the rooms, the first and second stories, twice a year, putting in, after cleaning out, about three to five loads of fine loam, which I turn over once in two weeks.

I feed as follows:—I have a box placed on the ground, about six inches high, that holds about half a bushel; the top is slatted, so that the hens cannot scratch out the grain. I keep in this box a mixture of corn, oats, barley, and buckwheat, in about equal parts. Every other day I feed about two pounds of boiled meat uncut, as I have found that chopped meat is apt to make the hens sick. During the winter I feed cabbage about twice a week, keeping pounded oyster shells and old plaster. I never put ashes where they can mix with the loam and manure, as I think that the quality of the manure is injured thereby. The nests I oil with a mixture of kerosene and tanner's oil, in the proportion of two parts of the former to one of the latter, about once in a month or six weeks. Hen lice will not stay where kerosene oil is put once in a while. The nests are made by sawing half barrels or nail kegs into halves.

I have not found putting ashes into the bottom of nests, of any use whatever. I have found corn meal injurious to the chicks of hens or turkeys. I feed the chicks of hens on cracked corn dry, being careful to keep water where they can get it at all times.

Turkeys thrive best when fed on hard boiled eggs and corn chopped fine, for the first two or three weeks. I have found that dough made from corn meal will kill young turkeys in a few days, if fed with it alone. Care should be taken to keep young turkeys or chickens out of the wet, or many will die. The coops should be brushed over with the above named mixture just before putting the brood in, and again in about three or four weeks; it should be with a movable bottom, which should be cleaned daily, the coop being set on the ground during the day, and on the bottom during the night, to prevent the skunks from taking the chickens. Chickens hatched before the appearance of insects, should have a little meat boiled so as to be quite easily pulled apart. I am quite sure that any one following these directions will find that each hen will net yearly from ninety cents to one dollar and a quarter; at least such has been my experience. BROOKS.

To Destroy Wire Worms.—Sow your land with buckwheat. Sure cure. B. *Clinton Co.*

LOSS OF QUEEN.

"Several of my hives of bees have died out this season." "There was a plenty of honey in the hive." "I don't see what was the matter." How often do we hear statements similar to the above? Well, friends, where and how do you keep your bees? "Why, I had them standing in a row in my snug little bee-house." "They had good hives, made by a first rate mechanic." "With all the pains and care I gave them, they died, when some old rickety hives, standing in the orchard, with little or no care, are apparently all right." "I have heard it said that successful bee-keeping was all in luck; and I begin to believe it, for the hives that I have taken the most pains with are the least profitable. Year after year, I lose some of my hives that I take the most pains to protect and guard."

Well, friend, notwithstanding all that has been written on the subject by *Quinby*, *Langstroth*, and a score of others, you seem totally ignorant of the cause of your losses. They tell you, and with truth, that bees placed side by side, in hives similar, are liable to lose their queens; and that the bees, without a queen, soon perish by the natural termination of their lives. When the young queen goes out to meet the drones, she is often unable to find her own home, enters the wrong hive, and is destroyed. In a bee-house, or contiguous hives, similar in appearance, it is as difficult for a queen to find the entrance to her own hive, as it would be for a stranger, in a strange city, to find a particular house, where there is great sameness among the buildings of the whole street, and no numbers, or other characteristics to point out the particular location. You must remember that queens seldom leave the hive. When they do, the road back should be so distinct that there could be no mistaking it. If your hives are near together, let them be dissimilar, or the entrances open different ways, or some shrub, or tree, near by, to distinctly mark the locality. If your ground will admit it, scatter your hives, here and there, about your premises. Be careful to place them where they will be convenient of access, and where they can be observed in swarming time. Your "rickety hives," in the orchard, were so placed that the queens had no trouble in finding their well-marked location, and consequently prospered.

L. L. F.

HOW I CURED A RUPTURE.

Years ago a son of some twelve years, says, "Father, I believe I'm bust." On examination, sure enough, a rupture showed itself the size of a hen's egg, upon the right side next to the thigh. He was advised to remain as quiet as possible for the day and some days following. The next morning we commenced steeping the inner rind—the white portion—of the bark of the white oak. As soon as the liquid was the strength of tea, the lad commenced the wetting of a cloth which was placed over the breach, as hot as he could conveniently bear it. The application was continued for some hours. The decoction constantly grew blacker and stronger until it became of the consistency of wax. The oak plaster was then put on, and a weak truss to hold it and the rupture in its place. This astringent medicine puckered the skin; the fresh wound through the inner coating soon healed over as sound as ever.

Not knowing as an application of this kind, so simple and efficacious, was ever used by others, I feel it a duty make it public, this being a very delicate and common complaint. Some old cases, slightly ruptured, have tried this remedy with equal success.

El Tejon, California. S. W. JEWETT.

HOW I KEEP A COW

MESSRS. EDITORS—I would like to tell your readers how I have kept a cow the year round, on the crops of grass that grow in one season on a small piece of ground. My land is what is called clay ground, and of course very productive of grass, so much so as to be almost incredible to persons acquainted only with growing grass on gravelly or sandy soils.

I have a piece of side-hill which faces a little east of south, thus being early of vegetation It contains seven-eighths of an acre, and is enclosed by itself. I have also about one-eighth of an acre of lawn around my "hut." The crops of grass from these two pieces of ground, one acre in all, are devoted to keeping a cow. I have a cow-house, 12 feet square, at the side of the barn-yard, a door to enter it from the yard, and one to enter from the outside without going through the yard, while taking care of the cow. In one corner of this house, and opposite the entrance from the yard, there is a manger or feeding-box; in another corner there is a place to spread straw for her bed. (In winter she is thus kept clean.) In the yard there is a tub to hold water for her drink in summer.

As soon as the grass is large enough to mow, which is usually about the 20th of May, I cut enough (early in the morning, while the dew is on it,) to last her twenty-four hours,—in bulk, the fill of three flour barrels, pressed in with the hand. Then, for convenience in feeding, this grass is conveyed and piled on the ground near the cow-house door which is entered from without, and *the dew being on it, if not piled too deep, it will not heat, but will be kept fresh through the day.* Then as to the feeding, one barrel of grass is dumped into the manger each morning, noon, and night. There are times when the grass contains too much moisture, which is known when the water in the tub is not diminished by drinking. In such case, I lay a lock of hay within her reach, so that she may mix her food, as to wet or dry, to her liking. When the grass in the field becomes full grown, and while yet palatable for feeding,—usually from the 10th to the 15th of June,—I cut for hay, except a small patch which is left for feeding, until the growth where first cut is large enough to cut again. Thus I keep on mowing round and round, from about the 20th of May to the 1st of October, going over the ground four times, and haying somewhat the second and third times of cutting, which is required to be done in order to make good hay and allow of a new growth for feeding. And this course has sufficed to keep a cow through the foddering season.

The lawn I mow seven or eight times, and feed as I mow. About the 1st of October the grass becomes too scant to mow to advantage; the cow is then turned into the lot to feed it off. In foddering I measure the hay, as I do the grass in summer, so as to be sure the cow has all she can eat. One barrel-full is given each morning, noon, and evening. The hay that I feed is good, so that she will eat from the top of the pile, and not besmear it with her breath and make it unpalatable. In cold weather the cow receives water —morning, noon, and evening—from a bucket, with hot water added to the cold, to take off the chill; also, each day during the foddering season she has a few vegetables given in two messes, immediately after being milked, so that she may know when to expect them. It will be seen by the above, that the cow at all times has access to her manger, for the door to the cow-house is only closed at night in cold weather, or on cold or stormy days in winter, and then she is within.

I think this method of keeping a cow, near perfection; because she can economize her food and time. As to her food, she can deposit her cud for undergoing a chemical change when she chooses, and make her food more productive. Then there is no loss of her *valuable time* for lack of something to do. In this way she will eat more, which is a pleasure to herself and a profit to her owner; for it would take a certain amount of food to sustain her system, that is, to renew the decay, and whatever more she eats is converted into milk or flesh. AMOS FISH.

Bethlehem, N. Y., March, 1864.

Planting Peach Pits---Grafting the Grape.

Having had a little bought wit, and as many rubs as "Old Hurricane," I will give you a few of them. On peaches you say crack the pits. I say put them in the ground as soon after eating the peach as possible —a sandy spot, covered with a thin stone one inch thick—keep off the snow, and plant them out as they open themselves in the spring, in soil rich, with no manure in the rows to attract the worms, to call the moles to disturb the tap-root—to be well tended, and bud the first year. What don't open the first year, will the second, if sufficiently frosted.

GRAFTING THE GRAPE.—I graft before the sap starts —cut the stalk 1½ inches above the joint—never bind, as it often stops the flow of sap, and causes separate rooting. After sealing well with warm grafting wax, then add two-thirds cow manure to one-third clay; a ball the size of a large egg. Cover the whole as you advise Mr. Schultz. Be sure to cut ripe wood for the grafts. JOSEPH BALDWIN.

REMEDY FOR ITCH OR SCAB IN SHEEP.

E. M. I. has received two answers to his inquiries, and I propose to give a third, as I consider my remedy much better than either, having by experience of eight or ten years, proved it effectual in curing the disease by washing two or three times immediately after shearing at intervals of eight or ten days each, the wash to be composed of the following ingredients: Tobacco, blue vitriol, soft-soap and sulphur—the quantity of each, for a flock of one hundred sheep, should be twelve lbs. good tobacco, which should be finely broken up and steeped in twenty gallons of soft water, but not allowed to boil—½ lb. blue vitriol, well pulverized and dissolved in a gallon of boiling water; pour in a quantity of this as often as you dip ten sheep, as it will not mix, but remain on the surface—two gallons of soft-soap and five lbs. of sulphur, to be sprinkled into the tub at intervals the same as the vitriol.

To think of curing this disease in a large flock with any kind of ointment, or with a bottle and quill, would be a fallacious idea—in reality, nothing but "gas and humbug;" the sheep must be *dipped*, and that *thoroughly*, and in order to do this in an effectual and economical manner, will require a large tub to dip them in, with a spout to drain the sheep on, leading to a smaller tub; thus most of the drippings will be saved. This, with plenty of sulphur in their salt every week, will prove "*the sure cure*," without any danger of catching it from the barn or yards again.

Warner, N. H. COMMON SENSE.

PRUNING PEACH TREES.

EDS. CO. GENT.—I see much in your valuable paper on pruning fruit trees, which is very good, and as I have learned much from the experience of others, I will give your readers my experience. I shall begin with the peach tree, and to represent my plan more fully I send four drawings, which, though very rough, will show the plan perfectly.

Fig. 1 represents the tree as it comes from the nursery. Fig. 2 repre-

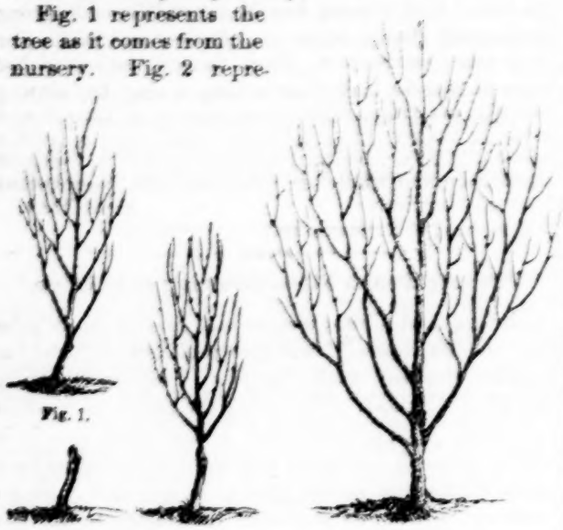


Fig. 1. Fig. 2. Fig. 3. Fig. 4.

sents it after being pruned. Fig. 3 represents it in August, four months after pruning. Fig 4 represents the tree as it is three years after planting. I cut to within four inches of where they were budded, or where the nurserymen cut them the year before; and when they sprout up, I rub off all the sprouts, except one which is the most upright, and cut the stem off close to where this bud starts, with a slanting cut, so that by the time the tree is a year planted the cut is healed over smooth and nearly straight.

Trees, two years old from the seed, or 18 months from the bud, are the kind to plant; for if older they become hide bound, and never make good trees. The after pruning consists in keeping the tree open by cutting out all dead wood and straggling branches, and shortening-in the top branches so as to bring the lower limbs up to the same height as the top, which makes a beautiful tree. The limbs will start from within a short distance from the ground, and thus make a tree that can be easily handled, and the fruit can nearly all be gathered without the use of the ladder, and if very heavily laden will not break but bend to the ground.

I have a plantation of 500 trees treated as above, and they are pronounced the best in the county by all that see them. They are three year planted again spring, and bore some fruit last summer.

The advantage in my plan is, the trees grow healthier, as the sun does not shine on the trunk, and the bark is more tender, and the wind does not affect thme so much, and in planting they are sure to grow, as in my plantation of five hundred, there were but three failed to grow.

I shall perhaps send you a few lines for your paper on my mode of planting and cultivation.

Pittsburgh, Pa. W. PETRIE.

PROVIDENCE.—A hasty man never wants woe.

Training Grapes to Lay Down in Winter without Breaking.

MESSRS. TUCKER & SON—The winters are gowing so very cold, it has become necessary to lay down our grapevines in order to secure a crop. I will give you

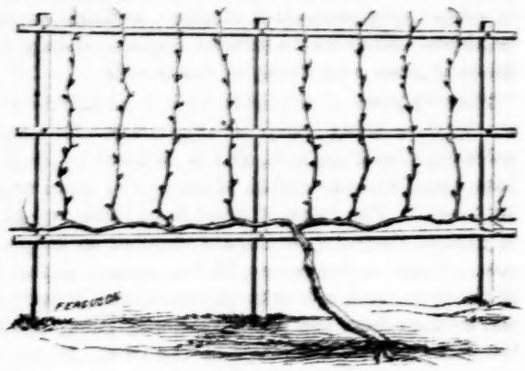


Fig. 1.

my plan to get more sun fore and after part of the day. My trellis runs east and west. I set my vines

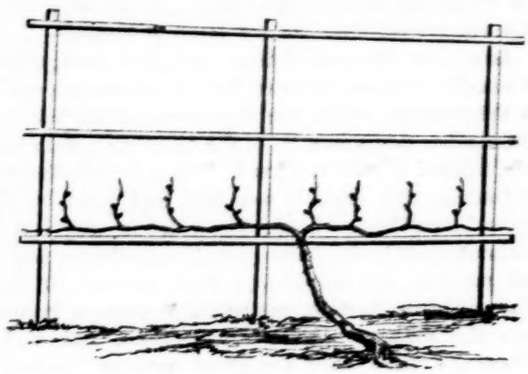


Fig. 2.

about 18 inches back of the trellis—the vine is brought under and tied to the lower slat; this brings it about

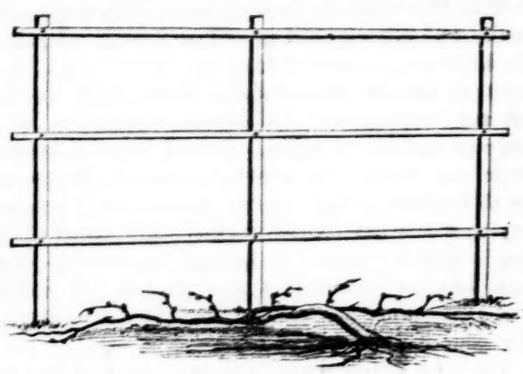


Fig. 3.

a quarter pitch. By so doing they can be laid down and raised up when very large, without injury. They must be trained with "arms" and upright canes, fig. 1. Fig. 2 represents the vine pruned to lay down. Fig 3 represents the vine laid down to cover for winter. You will see the vine lays flat on the ground. The work can be easily done. Light dry soil, muck, leaves, or old rotted manure, is good. If covered with wet heavy soil, it soaks and injures the buds.

By covering in winter they will ripen one week earlier, which is of much importance as far north as Oswego. S. WORDEN.

LAYING OUT ORCHARDS.

Every one will admit that an orchard handsomely laid out in perfectly straight rows, is in every respect better than where the trees are in crooked lines. A cultivator can feel no pride in giving proper cultivation to an awkwardly planted orchard; and trees standing out of line will be a constant annoyance to every plowman who is in the practice of laying perfectly even furrows.

Some planters take great pains in setting their trees, so that one tree at the end of the row will hide all the rest when the eye ranges through the line. But in securing this desirable object, a great deal of labor is often expended in sighting in different directions while setting each successive tree, so that every row may be straight every way. The following mode of laying out and planting will not require one-twentieth of the labor commonly devoted, may be performed under the direction of any common workman, and will give rows that will range perfectly, not only in both directions, but diagonally.

Fig. 1.

The first thing to do is to procure as many short pins or stakes, a few inches long, as there are to be trees in the orchard. These may be made by simply splitting short blocks or boards with an axe, say half an inch in diameter. Then procure a strong cord as long as one side of the orchard, or, if the orchard is very large, as long as each section may be, if necessary to divide it. Then, with a pole or other measure, mark off the distances of the trees on this line, sticking a common brass pin through at each place for a tree, bending it around the cord so that it will not come out. The field having been plowed and fitted for planting, we are now ready for operation. Select a still day, so that the wind will not blow the cord out of place, and then stretch the line along one side of the field, at a suitable distance from the fence where the first row is to be. Make it as straight as possible, by drawing on it forcibly; a stout cord being better than a feeble one, on this account. If the land be tolerably level, and a strong cord be selected thirty or forty rods may be measured off at a time. Place flat stones or other heavy weights upon it at intervals, to keep it in position; if there is some wind, some care will be necessary in making it perfectly straight before thus fixing it. Next, drive in one of the short pegsor sticks at each point marked by the pin already described. When this is done, one row will be marked. Then remove the line, and mark each end of the field at right angles to this in the same way. Lastly, mark the remaining side. Before marking both ends, it is safest to stretch the line on the fourth side, that all may be accurately spaced. Next, to fill up this hollow square with the proper marks, stretch the line successively between corresponding sticks on the opposite sides, and mark as before till the whole is completed. If the work has been carefully done, every stake will range perfectly. Every cord will stretch more or less, but if stretched so that the ends shall come out even each time, which is attended with no difficulty, the rows will be perfect, as shown in fig. 1.

Next, take a strip of board, say about eight feet long and six inches wide, as shown in fig. 2, and cut

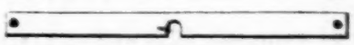


Fig. 2.

a notch in one side at the middle, just large enough to let in the stem of a tree. Bore a hole through each end, exactly at equal distances from this notch. Then, whenever a tree is to be planted, place the middle notch around the peg, and thrust two other pegs through the holes at the ends. Then take up the board, leaving these two pegs, dig the hole, replace the board, and set the tree in the notch. Proceed in this way till the whole orchard is planted. It is obvi-

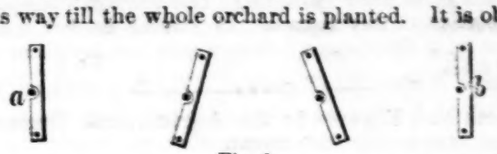


Fig. 3.

ous that the trees will stand precisely where the first pegs were placed, and will range in perfect rows. A large number or series of the two pins may be set successively by the board, so that a number of workmen may be digging and planting at the same time. It is of no importance in what direction the board is placed, as the pin and the tree will occupy the same spot as shown in fig. 3, the row extending from *a* to *b*

THE TURBAN SQUASH.

The above engraving gives this new French Squash with the extreme development of the prominence called "Acorn" at the calyx end. The Acorn varies from this extreme size down to a merely rudimentary form, these two extremes being sometimes found on squashes growing on the same vine.

Mr. J. J. H. GREGORY of Marblehead, Mass., who

was the introducer of the Hubbard Squash to general notice, thinks that the Turban corresponds in merits as a variety *for autumn use*, to the acknowledged excellence of the Hubbard as a *winter* variety. He says: "The Turban is dry, very fine grained, and rich flavored, and in thickness of the flesh, and specific gravity excels all other squashes, being bulk for bulk about one-fifth heavier than the Hubbard, and one-quarter heavier than the Marrow Squash. While the Hubbard does not usually acquire its maximum of sweetness and flavor until early winter, the Turban is a sweet, dry, fine grained and rich flavored squash when first gathered from the vine, and remains thus through the fall, excellent either for the table or pies."

The directions for cultivation given by Mr. G. are as follows:

Select good warm soil, fill it well with manure, then mark off the hills 8x9, mix in some fine stimulating manure in each hill, (such as superphosphate or guano,) and plant early in the season four seed. When the runners begin to show themselves, thin to two or even one plant to the hill, keep down the weeds, and loosen the soil between the hills frequently with the cultivator. If you wish to store the squashes, allow them to remain on till the vines are dead, when gather and store after two or three days exposure to the sun. Avoid piling them in the field, and do not expose them to cold rains after gathering; this hurts the keeping properties of any squash. In storing do not stand them with the "acorn" downwards, but lay them on the sides.

Facts and Figures in the Agricultural Department.

For a fortnight or more we have had before us the "Bi-Monthly Report of the Agricultural Department for January and February, 1864." We confess we have been quite at loss how to notice this extraordinary production as it really deserves.

Departing almost wholly from the original design of these periodical statements—which, if we are not mistaken, (and the Department can correct us if in error,) was simply to lay before the country the returns received as to the condition and prospects of the crops—we have here perhaps as curious a mixture of agricultural common-place and arithmetical miscalculation, of crude theory and loose assertion, as ever received the official sanction of a government office. And the wonder is that such a publication is allowed to pass unchallenged, and is even favorably noticed in some of the newspapers — which take for granted that it must be all correct and proper, since it comes from one of the Public Departments and has the signature of the Commissioner of Agriculture, without weighing its merit in the scale of common sense, or by the standard demanded in a document of such importance.

Our space will permit but a few casual illustrations of the truth of the foregoing criticisms. We shall not pause over the article on "Agricultural Colleges," with which the Report opens, to show either that it is something quite out of place in a document of the kind, or, supposing it to be appropriate, that it falls far below the standard that ought to be required of the Commissioner. So far as the article has any object, it seems to be to argue that Farmers' sons ought to be educated for *any other pursuit rather than their own:*

"The farmer's son is no more destined to agricultural pursuits than the son of the professional man. * * The time is not yet come in the United States, when the son will inherit the father's occupation. Nor is it desirable that it ever should be so. * * * Our Agricultural Colleges have heretofore failed because they aimed to educate for the pursuit of agriculture only."

It is difficult to conceive how a profound ignorance of the whole subject could be better exposed than in such flippant remarks as these. Every one who knows anything about the experiments in agricultural education so far tried in the United States, knows that their *greatest lack* has been in the effort "to educate for the pursuit of agriculture," and that just that sort of education—instead of causing the "failure" of any institution in this or any other country—is just what all friends of agriculture here and elsewhere are seeking to elucidate and develop. And yet the superintendent of the Agricultural Department of the government avails himself of his official position to tell us that we have already *gone too far* in this direction, and that we must be very careful *not* to educate our sons any more "for the pursuit of agriculture only." We are in little danger, apparently, so far as his advice or influence is concerned.

Leaving, however, such important questions, which may or may not strike the reader, according to the degree of thought he has given to them, we come to minor matters of fact and arithmetic, in which inconsistencies, both with truth and with itself, mark nearly or quite every article throughout this Report. Thus, in that on the future of American Cotton and Wool, we are told, p. 15, that "until the rebellion is overcome, and *one year's cotton crop* is made here, the wool-grower may confidently expect remunerative prices for his crop"—but, on page 17, that "if peace is conquered next summer, wool will *rapidly decline* in 1865," without waiting the growth of another cotton crop. Which theory shall we credit? "The flax product of the United States in 1860 was 3,778,843 pounds, *a decrease over one hundred per cent.* from that of 1850." When an amount is decreased 100 per cent., how much is left? A decrease in the imports of flax into Great Britain in 1863, as compared with previous years, is ascribed to the fact that 63,000 acres were planted to flax in Ireland in 1863, more than in 1862. How would this affect imports during the twelvemonth *before* this alleged increase of product could reach the market? There is a dearth of specie in England, p. 14, *because* that country now buys its cotton in India instead of in this country. But, page 13, our importations of English goods are said to be now "in excess." If we buy as large a quantity of English manufactures as ever, and make our payments in gold instead of cotton, how does this contribute to a scarcity of gold there?

"The imports into Great Britain [p. 15] *represents* nearly all the cotton production of the world." Bad in fact as in grammar: Appleton's Cyclopedia calculates the total production of cotton in the year 1855–6, at 4,338,350 bales, of which Great Britain consumed 2,183,300 bales, or rather less than *one-half*. In 1860 the production of cotton is stated elsewhere, at nearly 6,000,000 of bales—the consumption in England at about 3,500,000. In theories based upon data abounding in such inaccuracies, how much confidence can be reposed?

Coming to the next article—on Tobacco and its Taxation—we have farther instances of similar looseness

of statement. The entire Tobacco crop of the country, on page 24, is estimated at, "say 350,000,000 pounds." Turning back to page 19 in the *same article*, we find that the Tobacco crop of 1859 was returned by the Census of 1860 as "429,364,751 pounds"—a discrepancy in statements within five pages of each other, of 80,000,000 pounds. So as regards home consumption, p. 19 states it at 229,364,751 pounds; p. 24 estimates it at 150,000,000 pounds. But the most marvelous figuring of all is this—that if a tax were laid on Tobacco, "the tobacco-grower would find at the end of the year *two hundred and ten per cent. of his crop uns ld!*" The italics are ours, but we cannot fancy the condition of mind or the idea of mathematics that must be possessed by a man who could gravely make such an assertion and occupy page after page in figuring out its correctness.

Now, as we stated in the outset, these periodical reports were designed to be simple crop-bulletins, published as promptly as possible after the receipt of returns at the Department, and bringing all the light possible to bear upon the farmer's prospects both as regards his crops and the markets he is likely to find for them. Instead of issuing such reports monthly, it was announced in the autumn that they would only appear alternate months, in order to secure greater time and care in their preparation. Judging from the experiment as so far conducted, the increased interval does not seem to have been put to very good use.

If the Commissioner will insist on taking up grave questions for discussion in these bulletins, like that of Agricultural Education, we trust he will hereafter select those about which he is better informed, and on which he can bring forward suggestions or ideas that shall be of some real value; and if the preparation of statistical articles is entrusted to the clerks of the office, it is to be hoped that he will select for the duty those whose knowledge of figures at least reaches the mysteries of percentage, and who will not encumber with hap-hazard conjectures and absurd speculations, whatever tables of figures they may have to present.

It is an unpleasant duty to present such criticisms as these, and one that we would gladly avoid. The Department had of late apparently been improving in strength, and gaining in public confidence: through what sudden oversight or lack of judgment, the present Report can have gone to press, it is difficult to conjecture; but we have not felt at liberty to let it pass without protesting against the repetition of the experiment, in the interests of the Department itself, as well as of the Farmers of the country.

Remedy for Fistula and Poll-Evil.

Fistula and Poll-Evil are very quickly cured by the following mixture, if applied before the formation of matter:

2 drams pulverized Cantharides.
2 oz. spirits of turpentine.
½ pint fish-oil.

Let it stand two or three days before using; always shake well before applying. Rub on the affected part every third day, using a piece of leather, and rubbing until the leather heats. This rarely blisters the horse, though sometimes it will; in that case let the blister draw; it will do no hurt; apply oil to the blistered surface and the hair will soon grow. I have given this receipt to perhaps one hundred persons, and never knew it fail to cure. BUCKEYE.

THE IMPROVEMENT OF DAIRY STOCK.

This was the subject of a Lecture on the last Friday of March before the Farmers' Club of Little Falls, by LUTHER H. TUCKER of the *Country Gentleman*. We present the following abstract, availing ourselves for the purpose chiefly of the notes taken by Mr. J. R. Stebbins, Sec'y *pro tem.*, and published in the Little Falls Journal:

Mr. TUCKER was introduced to the Club by the President, and spoke in a familiar, easy, matter-of-fact way for about an hour. He said he had been somewhat at loss as to what subject to select with the hope of most interesting the Club. After considerable consideration he had concluded there was no subject of greater interest, or of more importance at the present time than that of the Improvement of Dairy Stock—not only in this dairying district but throughout the country. There is constant inquiry as to where to obtain good dairy stock, and farmers are often disappointed in such stock as they are now able to obtain. We have evidence of the improvement of which our cattle are susceptible in the beeves sent for slaughter to the Boston and New-York markets from the great West, where by crosses of improved blood an earlier maturity and a greater weight per head have both been obtained, so that the farmer has to keep his cattle on hand a year or more shorter time, and realizes perhaps a hundred pounds heavier carcass when he sells them, than was the case fifteen years ago. He thought it is by no means impossible to bring about a corresponding result in Dairy Stock, as regards the increased product to be obtained, and in the discussion of the subject he would propose four questions, the answers to which might throw some light upon the matter.

1st. *Should Dairy Farmers raise their own Cows or depend on other sources of supply?* In regard to this question he was sure the experience of those present must have shown the difficulty of selecting cows to purchase *with certainty* of obtaining good ones. The best judges are easily and often mistaken, and many risks have to be taken. There are districts in England, in which breeding is the almost exclusive interest of farmers, and from which young cattle are sent in large numbers to meet the demand in other parts of the country either for the dairy or for feeding. But we have not yet reached a similar point, as regards the division of labor; indeed he presumed that the best dairy districts in Great Britain breed a large proportion of their own cows, and there would be still greater reason for undertaking that here when almost the only other source of supply is the refuse from other localities—cows that come along from other farmers who for some good reason wish to get rid of them.

If you desire to improve your stock, the selection of the bull becomes a very important consideration. When the only purpose of the male is to produce calves which are at once slaughtered, any sort of animal sufficiently vigorous will answer, but other and much higher considerations are involved when these calves are destined ultimately to take the places of their dams in the milking herd, and if possible to be an improvement upon them in their yield of milk and cheese. Now, with the advantages we possess here, excelled by those of no other dairy region in the State, we could in time bring about a result which would make this a centre where all purchasers of the best cattle would come in the same manner as they seek the Ayrshires in England. For as we shall see when we come to speak of the different breeds, the Ayrshire is a composite breed, which derives its preeminence from the long efforts put forth in the county from which it comes to secure the best Dairying class of stock. He urged a general co-operation here, to see what might be accomplished in the same direction among ourselves.

His fundamental idea was, that it was best *to obtain*

a good bull. of an established breed, *to cross upon the best of the cows in our present herds.* He should be kept, except when in use, away from the cows. Breeders do not find this a difficult thing to do. Bulls so kept were much more tractable than when allowed to run, and the cows are likely to give more and better milk, with the fullest secretion of which the constant annoyance of a bull in the pasture is likely seriously to interfere.

2. *Are improvements to be effected by bringing "Natives," so called, to a higher standard or by crossing with the breeds of foreign origin?* Doubtless much could be done by proper efforts here; but across the water they have been at work fifty years or more, and if we can take advantage of their experiments and import their breeds, he thought it would be a wiser system, to start at their present stand-point than to insist on beginning again at the beginning for ourselves. It is undeniably the case that in home breeds some extraordinary cases may be found, but, as a general rule we cannot depend here on a good cow repeating herself with certainty. By taking a breed whose general character has been fully developed, and using a bull of a *fixed* breed, we are sure to get a calf bearing some of his points. We have all heard of the "Oakes cow" which was such a famous milker, and which has been a standing argument for "natives" for many years. But has there resulted an "Oakes" breed of milch cows that has done the country any good? Many other examples of the same kind might be taken.

3d. *Which of the breeds now accessible to the farmer promises greatest success to the dairy farmer?* Among those which have been most noted are the Devon, the Hereford, the Alderney, the Short-Horn and Ayrshire.

He briefly alluded to the distinguishing merits and qualities of these several breeds, and gave many interesting points of their history.

We would like to give this portion of his address entire, but our space will not permit. In his opinion either Short-Horn or Ayrshire blood would be preferred in this section. The former have the advantage of greater size, which, when the grasses of a country are sufficiently rich and the climate is not unfavorable, is certainly a strong point in their behalf, and while agricultural records are bare of very thorough or complete experiments going to show the comparative value of the two breeds for dairy purposes, there are many Short-Horn families which are naturally deep milkers, and which could not fail to effect very great improvement here. On the hills of New-England the Ayrshire, on the other hand, might be better able to withstand scantier herbage and bleaker exposure, and soil and climate had thus much to do in making the proper selection. He trusted that both Short-Horns and Ayrshires would be allowed a chance in Herkimer; neither could be used without contributing something toward the desired end, and as regards Ayrshires a beginning had already been effected by the recent purchases of Hon. W. I. SKINNER, the President of the Club.

4th. *What other considerations, either in feeding or breeding, have a bearing upon the improvement of dairy stock?*

Mr. T. advocated at some length the advantages of liberal feeding, citing among other authorities a letter published last week in the COUNTRY GENTLEMAN, from the Secretary of an Agricultural Society in Prussia, recording the wonderful milk giving capabilities of a cow, the property of Count Pinto, in Silesia. By careful feeding she had been made to give 38 American quarts in a day, from which were made at the rate of nearly 30 pounds of butter per week. A full and interesting account of Count Pinto's method of obtaining so great a supply of milk from his cows is given in this letter, and farmers will do well to refer to it for much valuable information.

Mr. T. then gave some valuable hints as to the care to be taken of pastures, and concluded by giving farmers much encouragement that the proper efforts in the way of improving their stock would yield ample reward.

On motion of Mr. Whitman a vote of thanks was extended to the speaker. Indeed there was a general expression of satisfaction, and the last question referred to, "the Better Feeding of Dairy stock," on motion of Mr. Reed, was made the subject for discussion at the next meeting of the Club.

AGRICULTURE OF IOWA.

The Fifth Annual Report of the Secretary of the Iowa State Agricultural College, W. D. WILSON, Esq., to the General Assembly of the State, for last year, was lately published in pamphlet form. Aside from the statement of operations in connection with the College Farm at Des Moines, it presents extracts from correspondence as to the success of seeds sent out to different localities, and a number of interesting tables of Agricultural Statistics from the Census of 1863.

Cotton seed was distributed for trial, and the reports of experiments in its culture "exhibit the full success of *four*, partial success of nine, and twelve failures." The culture of *winter wheat* has never been undertaken in some of the newer counties, and has been abandoned in great degree of late years in the older settled parts of the State, owing to the uncertainty of the crop. The effort was made to introduce it once more, in the belief that it might be grown more remuneratively than spring wheat, with proper management—particularly by deeper plowing, and earlier and deeper sowing. The experiment has met with success in a number of cases, and the crops grown were sold for seed so that some extension of the culture may result. For 1862, the census returns show 50,838 acres in winter wheat, against 1,098,998 in spring wheat, 1,733,503 in Indian corn, and 336,137 in oats.

The average wheat crop in Iowa for the last fourteen years is computed at "a small fraction under 12 bushels per acre," omitting 1858 when this grain was almost an entire failure—that year being the most disastrous one for the farmer on record. The average crop of Indian corn for the same period is 35¼ bushels per acre.

In 1862 Marion county produced 2,296,277 bushels of Indian corn, being an average of 47¼ bushels per acre, and Polk county averaged a little over 48 bush. But the general average of the State that year was not quite 35¼. The total product of grain in 1862, the principal stock raised, &c., are shown in the following table, which we make up from different parts of the report:

Agricultural Statistics of Iowa for 1862.

Farms—acres fenced 4,784,886—not fenced, 4,135,613.

Spring Wheat,.....	acres,	1,098,998	bushels,	8,052,684
Winter Wheat,.....	do.	50,838	do.	742,637
Indian Corn,.....	do.	1,733,503	do.	63,883,916
Oats,.....	do.	336,137	do.	7,582,060
Rye,.....	do.	36,963	do.	474,675
Barley,.....	do.	18,679	do.	385,067
Potatoes,.....	do.	35,535	do.	2,362,918
Sorghum,.....	do.	36,667	galls. syrup,	3,012,396
SHEEP—shorn 1862,.....		406,408	lbs. wool,	1,429,209
CATTLE—work oxen,.....		56,595	Milch Cows,	292,025
DAIRY—lbs. butter,.....		13,675,500	lbs. Cheese,	902,701

In connection with these figures there are many points which we should like to notice if space permitted. The report refers to the following among other facts: The wheat crop of 1862 suffered badly from the chinch bug. Rye is grown more as a forage crop than for use as a grain. Barley is fed to some extent,

but mainly malted, and is not grown in sufficient quantity to meet the demand for this purpose. *Flax* is now grown six times as largely as in 1859; that year Iowa produced 28,888 lbs. of lint against 158,918 in 1862. The production of *Butter* has increased, so that it averaged 19¼ pounds to each inhabitant of the State in 1862, against 11 pounds in 1849 and 1856, and 14 pounds in 1858. The average of butter and cheese per head for the total of milch cows reported in 1859, was equal in Iowa to a fraction less than 66 pounds butter, against 56 pounds in Illinois, 135 pounds in New-York, and about 106½ in Ohio. The number of sheep reported as shorn in the above table for 1862, 406,408 head, increased by the first of January, 1863, to 599,938 head. The average clip per head of sheep in the Western States in 1860 as per census of that year, was 2.67 pounds. The average per head in Iowa for that year was 2.52 pounds. The average per head in Iowa for 1862 was 3.51 pounds, or 0.84 of a pound beyond the mean of the United States for 1860.

Above we give the product of Sorghum as being 3,012,396 gallons of syrup. There are also reported 21,469 lbs. of sugar—5,000 in the county of Keokuk, and the rest in smaller quantities from various parts the State. The average cost of cultivation and working into syrup, is said not to exceed 20 cts. a gallon.

The census reports 8,360 acres as having been planted for timber during the year. This is a move in the right direction.

The Tobacco crop increased from 312,919 lbs. in 1859 to 517,194 lbs. in 1862, and probably to a considerably larger product still, in 1863.

Of Hogs there are reported sold for the year, 1,162,577, at an average value of $7 per head, against 614,108, in 1859. Of cattle there were sold 186,207, in 1862, against 175,000 in 1859.

The value of the agricultural productions of Iowa for 1862, is computed at $27,000,000, acording to the census returns, which are considered rather below than above the truth. The Report adds:

"Whether our figures of production are correct or not, within the past five years our people have recovered from the pressure of heavy indebtedness, and are now in a position generally, of comfort and ease. Those who were borrowers of money five years ago, in many instances, have now money to loan. Amidst all the vicissitudes of occasional short crops, heavy expenditures to sustain an expensive war, supplying the army of our country with 60,000 of the best men in the land, most of whom were employed in agricultural pursuits, our people are comfortable and prosperous, and with a prospect in the future not excelled by any people on the face of the globe."

THE DISCHARGE OF TILE DRAINS.

EDITORS CO. GENT.—During the recent storm of rain and snow my attention was attracted to some of my tile drains running quite freely, and my curiosity being excited, I determined to find out how much water they were discharging, and give you the result of the investigation. So, with watch in one hand and a pint measure in the other, I started out. The drains were discharging through 4-inch horse-shoe tile. So, springing my watch, and putting the pint measure under the same instant, I was surprised to find it full in five seconds, or 1½ gallons per minute, 90 gallons per hour, or 68 barrels and 18 gallons per day of 24 hours. Thinking, perhaps, this might be an exception, I went to other drains, with the same results—some even exceeding this. The field the experiment was made in is clay loam with a stiff clay subsoil; the drains are 40 feet apart and 3½ feet deep; 8 in number. The size of the field is two acres. Location, upland, so that there is no drainage from neighboring fields on to it.

Now let us see the amount this field is discharging. Eight drains, each discharging one pint of water in 5 seconds, or the whole field one gallon every 5 seconds, 12 gallons per minute, 720 gallons per hour, or 17280 gallons, or 547 barrels of water every 24 hours during a storm of rain such as we have just been having. Farmers, look to this—make the experiment and satisfy yourselves of the benefits of thorough drainage. Instead of having to wait with your plowing and seeding until this large amount of water is evaporated, you can, by thoroughly draining your lands, make them fit for the plow within a few days after a heavy fall of rain, and save time—and "time is money" now-a-days.

Waterloo, N. Y., April 11, 1864. SENECA.

SENDING SEEDS AND PLANTS BY MAIL.

The late act of Congress in authorising the sending of seeds, plants and cuttings by mail at a low rate of postage, is one of no small importance to the great mass of the people, extended as they are over so wide a district of country. It is often difficult in many parts theof country to procure fresh garden seeds, cuttings of rare trees, and new and valuable plants, and to order them by express, even on express routes, the charges in many instances will exceed to several times the value of the things ordered. But the late act of Congress authorises the sending of seeds, cuttings, &c., at so low a rate of postage as to bring them within the reach of all. The law specifies "*seeds, cuttings, bulbs, roots, and scions,*" which may be sent in packages not exceeding *four* pounds in weight, the specified limits of the law, at a rate of postage of *two cents* for every *four ounces*, or the same for any additional fraction of four ounces; *prepaid* by stamps. Formerly these things were subject to letter postage, and were generally put up in oiled silk, which is quite expensive, but since the reduction of postage this mode of carriage has been so extensively adopted that paper has been prepared so as to render it impervious to water and air, and is now sold at comparatively low prices. This paper is prepared by giving it a coat of boiled linseed oil, with a small quantity of dissolved India-rubber added. Those who wish to prepare paper for their own use, can make an article equally good by giving it a coat of linseed oil, and when dry, or nearly so, give it a coat of shellac dissolved in alcohol, reduced to the consistence of common varnish. Fine manilla paper should be used. To insure the safe transportation of plants in the mail, the roots should be protected with a covering of half an inch or an inch in thickness of swamp moss, or that gathered from the logs or rocks found in deeply shaded woods, and on the north sides of steep hills. The moss should be made moderately damp, and spread out upon the paper of suitable size, and with a small portion of the moss mixed among the roots. The whole is then rolled up snugly and tied, and then again covered with a wrapper of common post-office paper, to receive the directions, and marked "Seeds" or "Plants," as the case may be. H.

The Mocking Bird---*Mimus polyglottus.* BOIE.

The Mocking Bird has been compared to the European Nightengale—and indeed it merits it. Although it has become a fixed matter that Englishmen think that nothing that is found in America is equal to that found in their own country, yet we *sometimes* receive justice at their hands. Thus the Hon. Daines Barrington of the Royal Society of England, in a communication addressed to that Society says in regard to the Mocking Bird:

"It may not be improper, here, to consider whether the Nightengale may not have a very formidable competitor in the American Mocking-bird; though almost all travelers agree, that the concert in the European woods is superior to that of the other parts of the globe. * * I have happened, however, to hear the American Mocking-bird, in great perfection, at Messrs. Vogle's and Scott's, in Love-lane, Eastcheap. This bird is believed to be still living, and hath been in England these six years. During the space of a minute he imitated the Woodlark, Chaffinch, Blackbird, Thrush, and Sparrow; I was told also that he would bark like a dog; so that the bird seems to have no choice in his imitations; though his pipe comes nearest to our Nightengale of any bird I have yet met with."

When we consider that one of the chief reasons of the Nightengale being considered better than other songsters, is because it sings during the night, and if we believe like Shakespeare, that

> "The Nightengale, if she would sing by day
> When every goose is cackling, would be thought
> No better a musician than a Wren,"

is a bird that attracts attention by day, when every bird is singing, to be considered on a par with it?

His natural habitation is from the State of Pennsylvania to California, where his place is taken by a variety of the same species which has lately received the name of *Mimus Caudatus*, BAIRD. The difference of the *Mimus Caudatus* consists principally of the longer tail of this species, than that of *Mimus polyglottus*, as well as some other little peculiarities. He is also found in all the Southern States, and as far south as the interior of Brazil.

He was formerly seen occasionally in the vicinity of Philadelphia, from whence he has been gradually driven by a constant pursuit, which arose from the large price demanded and easily obtained by the bird-fancier. He is now only seen in this vicinity in a state of captivity.

"In his domesticated state, when he commences his career of song, it is impossible to stand by uninterested. He whistles for the dog; Cæsar starts up, wags his tail, and runs to meet his master. He squeaks out like a hurt chicken, and the hen hurries about with hanging wings, and bristled feathers clucking to protect its injured brood. The barking of the dog, the mewing of the cat, the creaking of a passing wheelbarrow, follow, with great truth and rapidity.

The time at which the mocking bird begins to build its nest varies a great deal, according to the locality. In the Southern States it begins to breed in the beginning of April. In the middle States, however, it does not breed until the 10th or 15th of May.

SNOW BUNTING---*Plectrophanes nivalis.* MEYER.

This bird must not be confounded with the common Snow Bird, (*Junco hyemalis*, SCLAT.,) as it is a very different bird. The Snow Bunting enters the Middle States in the latter part of November or in the early part of December. It is a very hardy bird—preferring always the colder parts of the United States.

Its migrations depend entirely upon the supply of food which it is able to find. Thus some winters it has been known to go as far south as Maryland. It is rarely, however, that this bird gets farther south than Pennsylvania. Nearly every winter large flocks, consisting of from forty to fifty birds, visit Pennsylvania during the winter season. At this time they may be seen perching upon the fence-rails and the roofs of low outbuildings.

Soon after arriving in the Middle States, if the winter be not unusually cold, they become very fat, and in this condition I believe they are sometimes shot or trapped for the market. In Long Island, and some other parts of New-York, the flesh of this bird is much esteemed by epicures as an article of food. Some even go so far as to call it the "Ortolan," after that ill-famed bird of the same name that inhabits the continent of Europe. This however is ridiculous. The author has never had the pleasure (?) of tasting the flesh of this bird, but has been confidently assured by those who have done so, that it does not compare in point of flavor or delicacy with that of the Reed Bird or Boblink (*Dolichonyx oryzivorus*, SW.)

The Snow Bunting is known by the name of the "White Bird" in Labrador and Newfoundland, owing to the white state in which its plumage is when in those countries. The plumage of this bird is at all times subject to much variation, so much so indeed that it is next to impossible to procure two specimens of this bird of exactly the same shade of color, and with exactly the same markings.

It has been known to breed in Massachusetts, and in the White Mountains of New-Hampshire. It makes its nest upon the ground, and forms it out of dry grass—lining it with hair. The eggs, which are four in number, are of a dull white color, spotted and marked with reddish brown, which is darker and more confluent towards the great end of the egg.

J. P. NORRIS.

Christianity is the good man's text; his life the illustration.

STAKING VIRGINIA FENCE.

MESSRS. EDS.—On page 187, current vol. Co. GENT., L. P. L. makes a motion for the adoption of his mode of "staking Virginia fence." Before the "dear people" unanimously adopt his plan, I would like to offer an amendment. Place the stakes on top of the ground on *one side*—not on "*either side*" of the fence, when it is laid up five rails high, and close in the corners between the *ends* of the rails of one length and the *rails* of the next; then with a coil of No. 9 annealed wire on the ground at your feet, with a hook formed on one end (with a pair of small pliers,) put said end around the stakes, draw the wire into the hook just tight enough to hold the stakes in the right position, bind the wire forming two hooks connected (and *no waste of wire*;) then with a triangle file cut the wire a little and break it off, and proceed in like manner with other corners. Fill the stakes above the wires two or three more rails, to make the fence the desired height. If a little care be taken in the selection of rails, the top rails will be so cramped between the stakes that no animal can easily remove them.

No stakes sharpened to drive in the ground—no shaving to allow the wire to be conveniently hammered down—no freezing out, requiring driving down every spring season, but a compact, firm, self-supporting fence, similar to the first of the kind I have ever seen, which I made in 1849, and which stands this fifteenth year without any repairs, excepting a few rails that decayed and failed, and were replaced by two persons holding up two corners while the third slipped in a rail.

The tendency of the "Virginia fence" is to fail for want of something to hold the several lengths at the proper angle, that the rails may remain crossed at the corners; otherwise the fence becomes so straight by accident or time that the rails fall off from each other, and finally prove a failure, which the stakes on *either side* has no power to prevent. To demonstrate, place the fingers of your two hands in a position representing the corners of a rail fence; then allow another person to place his two first fingers in the corners opposite your breast; then attempt to throw the elbows out from the body, and you will perceive how difficult it must be for a fence to fall down thus staked.

Clyde. J. W.

GRAFTING THE PIE CHERRY.

If you have a common sour cherry tree in your yard or fruit garden, from 5 to 8 years old, that does not produce fruit, you may have a larger tree in its place, loaded with the Early May, Early Richmond or Reine Hortense, simply by *cutting off all* the top limbs where they are from a half to three-quarters of an inch in diameter, leaving the stump thus cut 6 or 7 inches long—saw off with sharp saw, and then pare off the stump with a keen knife, and use a thin sharp one, with a light mallet, to split the stump—then put in a wedge in the centre of the stump, and open the cleft and put in a scion in each side; but if both should grow, cut one off about July following. The whole top should be thus grafted at once. It may require from ten to fifty scions. Care should be taken to get them in without bruising, and put in regular grafting wax, tolerably hot, with a little flat stick, thick enough to exclude the air and water. All the balance of top not used, should be cut off.

Scions are better cut in March. Grafting succeeds best here (Scioto Co., O.) 7th to 10th of April, and if it does well, you may have a good top and crop in two years. Try it in the Eastern States up to the 20th of April. A. L. WOOD, M. D.

BLACK OATS.

MESSRS. EDITORS—Your Lenox correspondent, C. H., inquires about black oats, and he shall have my experience: Five years ago I was visiting in Northwestern Pennsylvania, and chanced to meet with some very black oats, and brought home a half bushel of them in my trunk. When sowing time came I sowed a 4 acre lot with white oats that had been grown on vate 22 acres, five of which is in lawn, two in house, fruit, barns and roads, and two uncultivated, leaving but thirteen for cultivation.

my farm, and on one corner (no better than the rest) I sowed the half bushel of black oats, and the result was the white oats were cut and harvested just 14 days before the black oats were fit to cut. I had a good crop all over the lot, but the black oats were as high as my shoulders. The white oats yielded two bushels to the shook of 15 bundles; the black oats 2½ bushels the shook, and were 1 pound heavier than the white oats, 30 and 31 pounds. But I suppose the change from a cold section of land to a warmer and drier one, made them later. My land is yellow loam, the best of corn land, and also for oats. I have sowed the black oats every year since I got them, and the straw grows smaller, and oats grow whiter every year. They are now only about one-quarter black, and are no heavier than my native white oats. A change from a cold to a warmer climate is beneficial, (no matter about the color,) but beware of *foul seed*.

I was at the Fair at Great Barrington on the 30th of Sept. last, and journeyed up through Stockbridge, Lenox and Pittsfield with my wife and own team; I had an excellent view of those broad and fertile fields of the Housatonic valley, and it was a feast to my eyes to look upon such crops as I saw being harvested at that time, and should now think that oats had no business to *run out* on such land. The soil and its preparation is worth more to me than a change of seed.

I was sadly disappointed with the display of cattle at Great Barrington. Our own county of Litchfield can beat you out handsomely on cattle. I have seen one of my neighbors drive nine yoke of oxen and steers (all his own raising,) and not a white spot on one of them—all red, and all in one string, youngest or smallest on the lead. Can any one beat that?

Bethlem, Ct. L. F. SCOTT.

In answer to G. H. Jr.'s inquiry, would say that some years ago they were raised quite generally in *Franklin Co., Me.*, but at the present they are, probably, not to be found clear from white oats. They, like others, when first introduced, were more vigorous, but upon the whole are not liked as well as the white kinds. They are a large, plump, and very thick, hard-skinned oat; so much so, that the birds, squirrels and the domestic animals never eat them if any other of the cereals are to be had in lieu of them. I have known horses to refuse to eat them when clear, not because they did not like oats, but because there is something about them objectionable. Get white oats from a distance for seed. O. W. TRUE.

Farmington, Me.

THE CULTIVATOR.

ALBANY, N. Y., MAY, 1864.

☞ At a meeting of the Executive Committee of the State Agricultural Society in this city on Thursday last, the application presented by the Mayor and citizens of Rochester for the holding of the next State Fair at that place, *was accepted*, with the usual proviso as to the execution of the customary papers. The time appointed for the Fair is from the 20th to the 23d of September inclusive.

Agricultural Education.—Everything bearing upon this important subject is just now of great interest here, and we cannot acquaint ourselves too intimately with the results of experience bearing upon it, either in this country or abroad. Mr. Secretary FLINT, of the Massachusetts State Board of Agriculture, devotes 120 pages of his forthcoming Report for 1863, to an account of some of the leading Agricultural Schools of Europe, visited by him last summer, including Jena, Poppelsdorf, Geisberg, Hohenheim, and two or three others in Germany, Grignon in France, and Cirencester and Glasnevin in Great Britain. Very full statements are given as to the subjects and details of instruction, the general scope and purposes of the education given, and the degree of success apparently attained. In conclusion, Mr. FLINT refers to the question as to whether such institutions here should aim to educate "scientific agriculturists" like the highest of those abroad, or whether we should content ourselves, on the other hand, with a lower scale of scientific attainment, with the end of securing simply a more enlightened and skilful practice; and justly adds:

"The work of deciding this question satisfactorily and of carrying into operation a scheme of such magnitude as that now proposed in most of the loyal States of the Union is one of great difficulty and responsibility, and one in which the parties on whom the responsibility rests will need the forbearance, the confidence, and the cordial co-operation of the people. It will require caution, judgment and practical wisdom, on the one hand, and *a candid appreciation of the difficulties and the entertainment of reasonable expectations*, on the other."

Lice on Cattle.—Mr. HARRIS LEWIS, an excellent dairy farmer, of Herkimer county, thinks that a man who winters a good, thriving stock of Lice, on say forty head of cattle, does so at an expense of about $200. He informs the CO. GENT. of a remedy which has proved cheap, safe and effective with him, and which should be borne in mind by stock farmers for future use—viz.: He rubs a small quantity of unguentum (mercurial ointment) *on the stanchions* in his stables, for a distance of perhaps two feet, up and down, covering the edges which the cattle come in contact with. As this does not kill the nits, the operation is repeated at intervals of eight days, three times, by the end of which period they will all be pretty certainly hatched out and destroyed. A fourth application may be required, but he finds three almost invariably enough. A small quantity is only required, a very light coating serving the purpose, and by this method of application the cattle cannot get at it with their mouths, or otherwise receive any injury from it.

Another point in Mr. L.'s management worthy of note is this: He keeps salt in tubs in his cattle yards, constantly accessible to the stock, with which is mixed *sulphur*, in the proportion of about a tablespoonful to a quart of salt. This practice was begun some years ago, as a precaution against the murrain, for which purpose it was found effective, and it has been continued from the favorable influence it exerts upon the general health of the cows. Since its use, Mr. L. has had but a single case of *garget* in his herd, and he ascribes this exemption from that very troublesome difficulty among dairy farmers, solely to the use of sulphur.

Plan of a Dairy.—Our correspondent, T. K., of N. B., has sent us a neatly-drawn plan and section of a dairy, consisting mainly of a central room for dairy purposes, 14 feet square, sunk partly below the earth, and enclosed in walls of masonry, and furnished with windows. Outside of this room is a larger building, thus forming a passage around the first, seven feet wide, the windows of which are three feet above the ground to prevent dust from blowing in from the earth's surface. This plan appears to have some decided advantages, but it strikes us as requiring a large amount of wall and roof for the small space occupied by the dairy, the whole area of the building being five times as great as that of the dairy-room. We omit, or the present, engravings of the plan and section until we learn that it has succeeded well in practice, and would gladly receive any information on the latter point.

Heavy Hay Crop.—The Boston Cultivator contains an official report of the farm management of E. W. Clapp of Walpole, Mass. Among other interesting points, it is stated that he has within two or three years reclaimed an unsightly ten-acre bog, formerly of no value whatever, by cutting ditches around and through it. Three acres are already brought into excellent grass, and yielded last year between three and four tons of hay per acre. As farm machinery is extensively used, the owner finds it greatly to his advantage to employ mowing-machines, Bullard's hay-spreader, the wheel horse-rake, and Palmer's horse-fork. The hay-spreader is obviously of great advantage on such heavy meadow, drying the hay in much less time, and in a more perfect manner. The horse-fork is found to be a great saver of labor, a ton of hay having been pitched off in six minutes. We have known it to be done in half this time when all the appliances were ready, but some time is always necessarily required in attaching the horse, arranging the machinery, &c., so that ten or fifteen minutes will be consumed by common farm workmen, who would otherwise be more than half an hour in pitching off by hand. But the time thus saved is only one important advantage, the horse-fork obviates the very severe labor required for hand-pitching, so that the men are fresh and vigorous when they go to the field for the next load, and consequently they pitch it on in much less time, and do not become worn out with a single day's work.

The barn on this farm is 100 feet long—basement nine feet high, its floor of water lime cement; pens for the swine are in front, and having access to this basement. They work over into compost the manure as it falls from the animals above. The swine are furnished with food steamed in boxes or vats—the steam being brought in an underground pipe one hundred feet horizontally, to prevent danger to the buildings from fire.

Beetle Handles.—A correspondent of the Rural New-Yorker says the best way to insert the handle of a maul or beetle, so that it will never come out nor turn, is first to bore an auger-hole through the head an inch and a half in diameter, and then cut the hole square with a chisel, making it an inch and three-fourths long on the lower side. Then make the handle to fit this enlarged part at the end, working the rest of it down to an inch and a half in diameter, and bringing the handle up through from below.

Sale of Fat Sheep.—Mr. JURIAN WINNE of this county, has sold within the past two or three weeks the sheep fed by him during the winter, as follows:

258	head—aggregate weight	38,480	lbs.,	at	9¼c.,....	$3,559.40
200	do. do.	29,955	do.		9¼c.,....	2,845.72
173	do. do.	25,723	do.		9¼c.,....	2,443.68
1	do. do.	230	do.		——	25.00
632	head—average about 150 lbs, per head,.....					$8,873.80
153	head, bought up from time to time and fed on the farm only about four weeks,.....					1,357.05
	Total 785 head, average $13.03—Total,.....					$10,230.85

This price, although a fraction less than might perhaps have been obtained subsequently to the conclusion of the bargain, was *exclusive of any commission*, for the sheep delivered here at Albany, so that there is no drawback on the price received for transportation or other charges—the whole being purchased by Mr. McGraw on the spot. The 632 sheep fed by Mr. W. averaged a fraction over $14 a head, and the other 153, which were a separate lot, many of which had only been in his hands a short time, averaged a fraction less than $9 each—bringing the average on the whole as above stated, down to about $13—which, good as it is on an aggregate of nearly 800 head, is a little below Mr. W.'s anticipations for a lot of such weight and excellence.

The single sheep noted above as sold for $25—the only one not bought by Mr. McGraw—weighed alive 230 lbs. and netted after slaughter 169 lbs., which is quite a remarkable weight.

The expense of feeding during the past winter has been large, and as the sheep were bought in Canada the difference of exchange was heavily against the feeder, so that the net result was not as large as has sometimes been the case. One-half or three-quarters of a cent per lb. more—which would have brought the price up to what has sometimes been obtained in former years—would have made a great difference in the net profit—but, as it is, the return is not an unsatisfactory one pecuniarily, and fully maintains Mr. Winne's well-won pre-eminence in this branch of farming.

The City versus the Country.—Mr. James Miller, 522 Broadway, New-York, is soon to publish a volume entitled "*Ten Acres Enough:* A practical Experience, showing how a very Small Farm may be made to keep a very Large Family. With Extensive and Profitable Experience in the Cultivation of the Smaller Fruits."

We have been favored with one or two of the advance sheets of this book. The author, whose name does not appear, recounts fully—perhaps more fully than he would care to have done except in *incognito*—the particulars in his circumstances which led him, at the age of forty, to abandon mercantile life for a country home. Having reached that determination, he decided—as probably nine out of ten would *not* have done—in favor of cultivating a small area *well*, rather than attempting to farm upon the larger scale which would have seemed more tempting to most in his position—in a word, that "ten acres was *enough*." Hence he can illustrate by experience the truth of the precept laid down in his preface, and so often asserted in theory, that "the mistaken ambition for owning twice as much land as one can thoroughly manure or profitably cultivate, is the great agricultural sin of this country. Those who commit it," he continues, "by beginning wrong, too frequently continue wrong. Owning many acres is the sole idea. High cultivation of a small tract, is one of which they have little knowledge." Like hundreds of others who have left the city for rural pursuits, *the reading of the Agricultural Journals* was responsible, both for the idea, and for the way in which it was carried out. "My wife, also," he writes, "came in time to study them almost as attentively. Everything I saw in them only tended to confirm my longing for the country, while they gave definite views of what kind of farming I was fit for. In fact, *they educated me for the position before I assumed it.* I am sure they exercised a powerful influence in removing most of my wife's objections to live in the country. I studied their contents as carefully as did the writers who prepared them. I watched the reports of crops, of experiments, and of profits. The leading idea in my mind was this—that a man of ordinary industry and intelligence, by choosing a proper location within hourly reach of a great city market, could so cultivate a few acres as to insure a maintenance for his family, free from the ruinous vibrations of trade or commerce in the metropolis."

A book relating the personal experiences growing out of such views, and showing how readily success is attainable by the proper exercise of judgment, and without the intense application and wearying anxieties incident to trade, must be a boon to the community, and should be met with a liberal reception. We shall probably have occasion to refer again to the contents of the present volume.

Elihu Burritt Abroad.—We observe from an advertisement in our foreign papers, that the "learned blacksmith" is about to publish at London, under the title of "A Walk from London to John O'Groat's, with Notes by the Way," a book of about 400 pages, embellished with portraits of the late Jonas Webb, Alderman Mechi, Samuel Jonas of Chrishall Grange, and Anthony Cruickshank of Aberdeen, "with an extended account of the operations of these eminent and successful agriculturists and stock raisers. The notice of Jonas Webb will occupy about 30 pages, and constitute the fullest history of his life and labors that has yet been given to the public. A photographic likeness of the author will also appear as a frontispiece."

A New Corn Planter.—Mr. N. J. JONES of Saratoga Co., has shown us a contrivance lately patented by him, and mainly the invention of his son, a lad only 14 years old, for planting corn. A canvass bag of slender diameter—in fact only about as large as a hoe handle, is attached to that tool, furnished with a projecting arm just above the back of the hoe blade, so that by reversing the hoe after opening the place for the seed, and gently striking it on the ground, the grains drop out, regulated as to number by a simple gauge, and the hill is then covered by another stroke, and the whole job is completed. The bag contains seed enough for a row, when it is replenished before beginning anew. The attachment may easily be put on to any hoe, and strikes us as a handy and labor saving invention, worthy of introduction wherever Indian corn is not grown on a scale requiring planting by horse power.

Drouth in California.—From a weather note this week from one of our California correspondents, it will be perceived that the past season has there been one of unusual scarcity of rain. A writer in the San Francisco Farmer of the 11th of March gives a table of the rain-fall for each year since 1851, which shows remarkable fluctuations. Thus in 1851, a dry year, there fell *seven inches* of rain only—about one-half of it between the 1st of January and the 11th of March, and the remainder during the rest of the year. The rain-fall of 1853 was 33 inches—two-thirds of the amount before March 11th; and again in 1862, it was 37⅛ inches—the whole of this large amount, except about 2¾ inches, falling during the first 70 days of the year. The following year, 1863, the rain-fall to March 11th was 9.42 inches, after that date 5.75—total only 15.17 inches. Up to March 11th, 1864, it had been only 5.69 inches.

Illinois will hold its State Fair for 1864 at Decatur, during the week opening Sept. 12th.

"The Grape Culturist"—is the title of "A Treatise on the Cultivation of the Native Grape" just published by Mr. ANDREW S. FULLER, Brooklyn, N. Y.—a horticulturist of considerable experience, who understands very well, if we may judge from his present work, what information is most desired by beginners in the art. A cursory examination of Mr. F.'s treatise inclines us on the whole to give it the preference over any of its predecessors. It is manifestly the direct result of observation and practice, and while there may be differences of opinion as to some of the conclusions arrived at, no one can read it without profit. It has the merit, too, of being concise—without extraneous matter of any sort for the mere purpose of swelling its size, while illustrations are supplied wherever they can be made to throw light on the text, neither for the mere desire of having pictures on the one hand, nor, on the other, a re-appearance of old stereotypes already familiar to the eye. The descriptions of varieties—omitting minute detail, into which we have not yet examined—appear to present a fair and judicious estimate as a whole, and to assume no positions from which the author may hereafter desire to recede.

Sheep in Massachusetts.—A meeting of gentlemen interested in the encouragement of sheep husbandry was held at Boston, April 6th, which resulted in the organization of an association under the name of the Massachusetts Society for Encouraging Sheep Husbandry. It was resolved that an annual meeting should be held for discussion, and all information bearing upon the raising of sheep freely circulated for the benefit of farmers engaged in the business. The following list of officers was elected:

President—WINTHROP W. CHENERY.
Secretary—C. L. Flint.
Treasurer—J. R. Brewer.

Directors—Thomas Motley, Jr., P. C. Brooks, Jr., David Sears, Jr., R. S. Fay, Francis Bacon, Charles Corliss, I. W. Andrews, Albert C. Heath.

And a Vice-President for each county in the State. An exhibition of sheep was also held the same day, which, although limited in numbers, appears to have been good in kind, including representatives of the several most prominent breeds.

Profits of Farming.—No one can doubt but that Mr. J. S. Graves of Hatfield, Mass., found farming a profitable business the past year. The Greenfield Gazette says that he "received not less than *eighteen thousand dollars* from the product of his farm last year, of which amount nearly *fourteen thousand dollars* must have been clear of all expenses. From twenty-five acres planted to tobacco he produced 21½ tons that sold for 33 cents per pound, the highest amount paid for any tobacco in the county. He raised about 600 bushels of corn from 12 acres of land, 180 bushels of wheat, cut 100 tons of hay, received a profit of $200 from grass-fed cattle, and is now fattening 150 sheep and 30 head of cattle. Mr. Graves, it is said, has always raised the best quality of tobacco of any one in Hatfield, which he attributes to feeding large quantities of cotton-seed meal while fattening cattle. The tobacco is said to be of a firmer texture than that grown on land where the usual fertilizers are used. Of the 25 acres of tobacco grown, Mr. Graves hired 12 acres of it cultivated, for which he gave $75 per acre. This included fitting the land and hanging the tobacco in the sheds."

Feeding Wheat to Horses.—I see an article in my Co. GENT., Jan. 14, 1864, p. 32, in regard to feeding wheat. Necessity drove me to it. I sold my hay at 4 and 5 cts. per lb., oats at 10 cts., corn at 7 cts., barley at 8 cts., and wheat at 6 cts. I found wheat cheapest. I commenced feeding my farm horses on wheat (dry) at first. The wheat was hard and flinty. I then soaked it for six hours, and that filled the bill. My horses thrived, and it seemed to give them powerful strength and durability. I also gave them wheat straw and chaff. I shall continue the same hereafter. A. H. MILES.

Zeandale Farm, Colorado Ter., March, 1864.

Sales of Improved Stock.—The demand for Improved Stock appears to be brisker this spring than for some time past. A recent advertiser in the Co. GENT., who offered a limited number of Short Horns and South Downs for sale, writes in paying the bill, that he is "heartily glad it is through with. I have been perfectly overwhelmed," he says, "with applications, and think I could have sold all of THORNE's herd, if I had been the fortunate possessor." This is in Pennsylvania. Mr. C. K. WARD of Genesee county, who advertises this week, mentions that he has just sold to W. N. PERRY of Yates county, "three heifers (Short Horns) 'Lady Bowen,' 'Bright Eyes 12th,' and 'Hope 8th,' making in all twelve head sold during the winter and spring at remunerative prices." We understand that from the admirable herd of JAS. O. SHELDON, Esq., of Geneva, which has been enlarged during the past season by the purchase of a number of valuable animals from Mr. ALEXANDER and other leading breeders, many sales at encouraging prices have been lately made.

While the subject is in hand we should also mention that T. L. HARISON, Esq., of Morley, St. Lawrence county, has just published a very neat catalogue of his Short Horn herd, to which we may invite the attention of buyers with confidence. Copies may be had by addressing Mr. H., as above, or by calling at this office.

Chiccory.—I would say I only dug part of mine last fall. I had about ten bushels; I let it stand in the ground over winter, and dug it the first of March. It is just as good as that I dug in the fall. I tried all the ways of drying it I saw in print, but took a plan of my own, which I think proves to be far the best. I take a chopping bowl and knife and chop them as I would apples, only not so fine, and they dry quicker and are ready for use. C. H.

Applying Plaster of Paris and Ashes.—From a long experience I am satisfied that the best way is to mix the two in the proportion of one part plaster and two of ashes, rather than to use either alone. Applied to corn at planting, the mixture gives it an early vigorous start, and on potatoes at hoeing, will increase the quantity and improve the quality. N. S.

Wines.—Sam Patch said that "some things could be done as well as others." And why not? There is a man residing in New-Jersey who is making thousands out of the sale of elderberry wine, under the name of SAMBUCI WINE. He purchases large quantities of elderberries (*Sambucus vigra*) in their season, and makes a very palatable wine, which is pronounced by many as delicious, under the name of Sambuci, but would be voted abominable as plain common elderberry. Now I intend making a large quantity of good old-fashioned farmer's currant wine this season from one of the best receipts published in the Co. GENT., and advertise it extensively as RIBES RUBRUM WINE. I shall take good care to present clergymen, physicians, and others, in different localities, with a bottle each, to secure their good opinion. I find I am too late to try rhubarb, as that is about to be made so public under the name of Wine Plant, and then the botanical name (*Rheum*) is so suggestive of salt-rheum and rheumatism that it wouldn't *go down* with the public. So look out for sparkling Ribes wine.

Red Hook, N. Y. JOHN JIMMIJON.

Feeding Wheat to Sheep.—Short in hay and corn, I have fed a good deal of wheat in sheaves to my sheep, with good success. To dress the wheat, to haul to market, and then to haul corn home, will make up all the difference in the price. I did'nt lose anything on straw and chaff. Sheep will not be fed very heavy with wheat; then they don't eat it clean. Some ewes in lamb, which I put with the flock which got the wheat, had sound lambs. E. S. *Henry Co., Ill.*

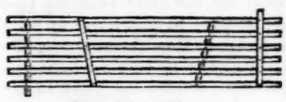
Growth of Cattle.—In the spring of 1849 I bought two yearling calves for $10.25 each. I afterwards partially broke them for work oxen, and in April, 1851, I sold them for $31.50 each. A year or two after, Mr. Crist, to whom I sold them, sold them for about $90 the pair, to a Mr. Gorsuch, and in a couple of years Mr. G. sold them for slaughtering for $196 the pair.

Frederick, Md. W. C. H.

Vegetable Seeds.—The Department of Agriculture will please accept our acknowledgements for a package of vegetable seeds.

Inquiries and Answers.

Portable Fence.—On page 79, present vol. of THE CULTIVATOR, I saw a piece headed "Portable Fence." I do not think C., can find any better or cheaper portable fence than that mentioned and described in back numbers of the CULT. and Co. GENT. as Watson's no-patent Portable Fence. It does not require quite twenty-four feet, surface measure, of inch and an eighth stuff, to a length of thirteen feet. L. O. [This fence is thus described: It consists of six rails, 13 feet long, sawed of tough timber, 2½ or 3 inches wide, and 1¼ inch thick. These



Watson's Fence.

are placed respectively at distances of 4, 5, 6, 7 and 8 inches, & secured by wrought nails to cross bars or battens, as represented. A 13-feet rail will make three of these battens without loss of stuff, and they are placed on alternate sides for binding the fence more securely at the corners. When placed in position, the ends interlock, and are connected by a loop of No. 9 annealed wire. The acuteness of the angles is determined by the length of this loop, and the fence is thus modified for windy or sheltered places. The cost is about 50 cents a rod.]

Pea Crop.—Will you give some of your subscribers in these benighted parts, some ideas on the growing of field peas in your State—as to when they are sown—how many bushels per acre—what is the best variety, and where can they be obtained? Are they sown with oats? An article on the subject would be of great value, I think, to many of the farmers here. S. P. N. *Yardville, N. J.* [The time for sowing should be with other spring crops, or as early as the ground can be fitted in good condition. Where the soil is good or fertile, the Marrowfat is perhaps the best variety; on poorer land the small yellow pea is thought by some to do best. Experiments indicate that broadcast sowing is best for the pea, as it is more difficult to cultivate it and keep it clear of weeds, than corn-fodder, which is always best in drills. The large Marrowfat, if sown at the rate of three bushels or more per acre, shades the ground well, and keeps it nearly free from weeds. The practice of sowing one bushel of peas with two of oats, has been adopted by some with success—the oats tending to prevent the peas from falling, and the mixture of the two grains when ground forming an excellent mixture for horses, cattle, swine and sheep, less concentrated and cloying than peas alone, and richer and better than oats. The pea is a valuable crop on various accounts, the food being very rich and nutritive, and the ground being left in fine order for winter wheat. Manure from animals fed on peas is rich and valuable. The best way to harvest peas is to cut them with a scythe, rolling them by the operation into masses or heaps of convenient size. The seed can be obtained at the principal city agricultural stores.]

Liquid Manure on Grass.—Please to tell us when is the best time to apply liquid manure to meadow land. Can it be applied so rich and thick as to injure the grass at any time? G. C. H. [Early in spring is probably the best time to apply well-fermented liquid manure. As ordinarily made from manure heaps, or in barn-yards, it would produce no injury if applied copiously, but fresh and concentrated it might do so. On retentive or heavy soils it might be applied almost any time of the year, although its most efficient results would be in spring.]

Lime and Tan Bark.—Will it be better to mix lime with well rotted tan-bark than to use it alone? I propose to use it in conjunction with wood ashes on my onion patch, and as a beginner would like to know how to apply to the best advantage. J. O. S. *Coopersburg, Pa.* [We know of no experiments for decisively testing this question, but as old or decayed tan-bark is chiefly vegetable matter, it would doubtless be useful in rendering heavy soils light, or any soils deficient in vegetable mold. Mixing it with lime or ashes for some weeks before using, would be useful; or mixing it in compost with common manure, or scattering it over barn-yards, would answer a good purpose.]

Grout Wall.—I want to ask for a little information in relation to sand and lime or grout walls. How have they answered the place of stone for walls? Would it be safe to put a wall of this kind under a large barn for stable basement, &c.? CONSTANT READER. [It would be safest to build the underpinning of stone and mortar, in the common way, unless the grout wall can be made in the most perfect manner of pure lime and sharp clean sand; and even in this case, the part in contact with the moist earth would be liable to injury by freezing. Perfect hydraulic cement would be best for the lower part of the wall. We have seen the addition of one-fourth water-lime to common mortar effect a great improvement in its hardness and permanence.]

Field Culture of Beans.—I wish to put in a crop of beans, but never having raised a field crop, would be much obliged if some of your correspondents who have had experience, would give through your columns their views as to the best kind to raise, the most suitable soil, best method of field culture and harvesting—also quantity seed per acre, and the average yield per acre? INDIANA FARMER. [You will find an article on the culture of beans in the Co. GENT. of last week, p. 203, in which most of your questions are answered. The varieties of field beans known as Marrow and Kidney bring the highest price in market. The late Judge Buel said of this crop: "They leave the soil in good tilth. I cultivated beans the last year in three different ways, viz., in hills, and drills, and sowed broadcast. I need not describe the first, which is a well known process. I had an acre in drills, which was the best crop I ever saw. My management was this: on the acre of light ground, where the clover had been frozen out the preceding winter, I spread eight loads of long manure, and immediately plowed and harrowed the ground. Drills of furrows were then made with a light plow, at the distance of two and a half feet, and the beans thrown along the furrows about the 25th of May, by the hand, at the rate of at least a bushel on the acre. I then ganged a double mold board plow, which was passed once between the rows, and was followed by a light, one-horse roller, which flattened the ridges. The crop was twice cleaned of weeds by the hoe, but not earthed. The produce was more than forty-eight bushels by actual measurement."

Trees for Screen.—Please give me a list of shrubs and trees, partly evergreen, for screening a barn. J. R. [If for screening the barn and yard from severe winds, we should plant mostly evergreens. The Norway Spruce is perhaps best, then Scotch Pine, White Pine, Arbor Vitæ, Hemlock, &c. If merely for hiding the barn from view, rapid-growing deciduous trees, such as Silver Poplar, Silver Maple, Scotch Larch, &c., may be added to the evergreens.]

The Grain Aphis.—In the summer of 1862, a small red insect infested our wheat crop about the time of its blossoming, and continued upon the head until it was nearly ripe. They were so few in number as to attract but little attention, and excite no fear. But last summer, 1863, the wheat head was literally covered with them—so thick were they that the stem between the grains of wheat was perfectly red. Some consider that the crop sustained no injury whatever from them, while others contend that it suffered materially from them—for my part I can not understand how fifteen or twenty insects can subsist upon one head of wheat without drawing largely from its nutritive powers. I can honestly avow that some of my wheat that was neither rusted, smutted, nor lodged, raised upon good rich wheat soil, which has been well plowed and never exhausted, fell short in weight about four pounds to the bushel. A. B. *Fond du Lac Co., Wis.* [Our back volumes give a full account of this insect, which for one or two seasons was very prevalent in this State. It has now passed away, however, and we think our correspondent probably need not apprehend farther injury from it to any extent. It undoubtedly lessened the weight of his crop in the case mentioned.]

Poultry.—What do you consider to be the best kind of chickens in regard to laying, size and hardihood, and where could I get the purest blood? W. W. H. [It is impossible to specify "the best" single breed in all respects; our correspondent may procure Bement's Poulterer's Companion to advantage (price $1.50) and familiarize himself with the merits of different breeds, and then procure that of which he can get the best samples. And here we may add that there are either very few careful breeders of good poultry now in this country, or else that they are all o a very retiring character—we have dozens of inquiries for fowls, to one advertisement of them for sale.]

Onions.—I would like to know through your columns the way you plant onion seed, and where the seed is to be found, also how much seed to the acre? A. B. *Whitehall, Ill.* [The seed may be had from either of the Seedsmen advertising in this paper. Sow in rows 13 inches apart, four pounds seed to the acre. For a very full essay on the subject see Co. GENT. of Nov. 5 and 12, 1863.

Clover for Orchards.—Will clover sown in an old orchard this spring, grow well if coarse barn-yard manure is spread evenly over it, or will the manure kill its growth instead of promoting it? My idea is to grow a large crop of clover, and plow it under to enrich the orchard; if any one knows of a better way to do it without much manure, will they state it? 1864. [Our correspondent does not state whether the orchard is now in grass, or has a mellow cultivated surface. There are some difficulties in the plan adopted. Clover is rather a hard crop for an orchard, and the roots and trees would prevent that complete turning under which would be desirable. To sow clover among grass, the surface should be well harrowed or scarified, and after the seed is sown it should be rolled or brushed. On a mellow surface, sowing and rolling alone will do. Clover will not grow well in an old orchard, when nearly the whole surface is densely shaded. Coarse manure would not answer for covering the seed; but old manure or compost, thinly and evenly spread over the surface, would *not* only secure the more perfect germination of all the seed, but push the young crop forward rapidly.]

Bone Manure.—Would you be good enough to give me some information in regard to the usual manner of reducing "bones" sufficiently fine for immediate action on land, without the process of dissolving them in acid. I would prefer grinding them, as I have water-power on my premises, and would be glad to know if they are first softened in any manner before grinding and what sort of mill is used for the purpose. G. W. P. *Salisbury, Md.* [Bones cannot be advantageously used without breaking fine or grinding. We are not able to state what kind of mill has proved the best for this purpose. Plaster mills, and those used for grinding corn in the cob, are said to have done well. After breaking or grinding, probably the best way is to mix the bones in thin alternate layers with loam, and after the heat thus made ferments and has begun to cool, chop it down, work it over, and thoroughly intermix it with a shovel. Repeating the process after a second and third heating, will give an excellent concentrated manure. The best mill for grinding bones is made in Baltimore, but by whom we are unable to say.]

Manure.—Does the earth taken from under an old barn, part of which is a stable, contain sterile acids in sufficient quantity to be injurious if applied as a top-dressing on a cultivated field, or mixed by plowing in? Please answer through the columns of your valuable COUNTRY GENTLEMAN, and oblige C. L. W. [There is no "sterile acid" in a soil of this character. Large quantities of liquid manure penetrating soils will sometimes render them sterile by being too sharp or stimulating, in the same way that undiluted guano will destroy vegetation. If the soil is too rich in the instance alluded to, it will form an excellent manure when spread and mixed with other soils.]

Gang or Double Plow.—I want to purchase a Gang plow, consisting of two plows, arranged to turn a furrow ten or twelve inches wide each and eight to ten inches deep, so constructed as to be drawn by a three horse team and handled by one man. Is there such a farm implement manufactured, and if so, where can I obtain one? Such a plow, properly constructed, would meet with ready sale during these times of high price for labor. J. H. V. H. [We do not know of such a gang plow, but one might doubtless be easily constructed by any plow manufacturer familiar with the mode of attaching them together.]

Ashes.—I want to know whether it is advisable to use hard wood ashes on stiff clay grounds, say kitchen garden. Opinions here are as numerous as the persons consulted. I have covered the ground with one inch of sand, shall manure heavily, plow deep, and underdrain, and now want to know about the ashes? S. L. *Orono, Me.* [The ashes can hardly fail to be a beneficial application; although, if any one has tried them carefully, and still expresses an opinion against their use on similar soil, it might be well to apply in the first place on only a part of the surface, and let the result indicate the proper course as regards the remainder.]

Washing Machines.—I would esteem it a favor if you will forward me the address of the proprietor of the Union Washing Machine, Clothes Dryer and Wringer. I want to purchase these articles, and my desire to do so is based upon *your* recommendation. If you know of any *better* invention, please advise me. G. W. C. [We are unable to furnish the address asked for. There are quite a number of Washing Machines and Clothes Wringers in market, but we are unable to say which is best.]

Feeding Sheep.—J. B. Rieff (p. 236) should have his sheep at least fair mutton when he commences feeding grain, and I know that he can improve them greatly on one pound of corn or oil-cake meal each per day. The latter is best. The straw ought to be cut before fully ripe. It almost never pays to commence with either lean cattle or sheep to fat in winter.
JOHN JOHNSTON.

Feeding Oil-Cake.—David V. Forney (p. 240) cannot feed oil-cake unless melted or ground fine. If he buys from the makers they will grind it—if he buys the cake from dealers, he would either have to put the cakes in hot water and scrape off as it softens, and make in balls and feed while soft, or else take it to a plaster-mill and have it ground there, but in that way there is danger that any plaster in mill might mix with the meal and kill some of his stock. He may as well feed his cattle rocks as feed cake without grinding or making it soft in hot water, and that won't pay where labor is high. Buy from the manufacturer, and then you get it perfectly ground. It does very well to mix the meal with chaff. I have often fed that way. It would also do well to feed with cut hay or straw—in fact it does well fed any way that the animals can eat it. I have fed more or less every year for 26 years. I fed five tons to my sheep this year, and more than a ton to cattle. JOHN JOHNSTON.

Onion Sets.—Please inform me through your valuable paper the proper time and method of sowing onion seed for sets, whether in drills or broadcast? J. C. [The small onions of last year may be used for sets—planted early, at intervals of about two inches, in rows 14 inches apart, and pinching off the seed tops close down to the leaves as soon as they fairly begin to bulge out. We should be glad of any further information for the benefit of our correspondent, if any other way of growing sets is preferable to this.]

Growing Corn for Soiling.—In a conversation with an intelligent dairyman last fall, on the subject of sowing corn for summer feeding, he strongly advocated thin sowing, and the reason he gave was that where it was thinly seeded, there would be a nearly full grown ear upon most of the stalks, and that he would rather have an ear than a handful of stalks without the ear. Since then I have had conversation with a number of successful dairymen, who advocate the same thing, and they all agree in saying that the green succulent ear of corn is of more benefit for milk than fodder that is sown thicker and without ears. Now I must confess that the position taken by the dairymen mentioned agrees with my views and practice, and I wish to ask who are right, or the nearest right, in the premises—those that advocate thick seeding, say three bushels per acre of seed corn, or those of us that think one bushel is better, and that the last named quantity is sufficient in all cases where the ground is properly prepared and of sufficient fertility to produce a good crop. As the season is advancing, it may be a good time to compare notes on the question, so as to be able to act understandingly in the premises. Some dairymen advocate the sowing of sweet corn for feeding purposes when green. If any one has had experience in that variety of corn for such purposes, I should like to hear what the result was, compared with other varieties. In my own experience, the common 8 to 12 rowed varieties have been sown, or drilled rather, as I use a drill for such purposes. JONATHAN TALCOTT. *Rome, N. Y.*

Flax.—Last May 22d, I sowed two bushels of flax on two acres of low black land, which had been a sod planted with corn. It was covered with water, or rather too wet to cultivate before the middle of May. It came up well, grew large, and had all the appearance of an excellent crop, but on threshing it, gave but four bushels of seed per acre. Some tell me it was sown too thick; others say it will not grow on such soil, and will not answer to be sown as late as the last of May. As it is a new crop in this community, will some one enlighten us? B.

Death among Lambs.—During the past four or five weeks we have had several somewhat singular deaths among our lambs. And, as I like to know, as near as possible, what ails the poor creatures, (even if I can do them no good), I thought I would make inquiry through your most excellent paper, hoping to receive some light on the subject. The first of January we had seventy-one lambs, all looking and doing well. Toward the last of the month I noticed three or four that seemed to be falling away, but appeared as lively and hearty as the rest of the flock. The first of February two of them died, and others began to fall away. They continued to drop off one by one, so I concluded to make an examination of some of the defunct lambs. I did so, and as far as I was capable of judging, could see nothing wrong until I came to the valve of the wind-

pipe; there I found two large insects, somewhat resembling the cattle warble, which I took to be the grub or larva of the Gad-fly. They seemed to be fastened to the valve by a hook by the side of their mouths. There were also several of these insects in the sinuses of the head. The sheep do not seem to suffer until toward the last, when they sneeze and cough most violently. They continue willing to eat until the coughing takes place, when they soon expire. Some writers think grub in the head do sheep no injury, but if this be grub in the head, I think it hurts them slightly. If you or any of your writers can give any light on the subject, it will be very thankfully received. I attribute the coughing to the insect on the windpipe, and the sneezing to those in sinuses of the head. I send you some of the insects, hoping by them, you or some of your writers will be able to give some light on the subject. H. C. R. L. *Zanesville, Ohio.* [The grubs sent us are undoubtedly the larvæ of the Gad-fly.]

Baulky Horses.—In answer to inquiry how to man- a starting horse, having had some experience in breaking horses I would say, I know of no better way of teaching a horse to mind the word "whoa," than the moment he starts without the word to jerk hard on one line, saying "whoa" sharply at the same time, and repeating the punishment whenever the horse starts. He will soon learn to avoid the pain by obeying. It is a more preferable way however, to teach them when they are colts, without being harnessed. If a horse is baulky, it is a more difficult matter, and needs mildness and firmness combined. The Rarey method of driving a running or kicking horse, is to buckle a strap around the ankle of one of the fore feet, passing it over the belly-band, thence into the wagon, and the moment the horse becomes intractable, draw on the strap, which will bring the horse on three legs, putting an effectual check upon his rebellion. I have tried it to my own satisfaction, or I would not recommend it. E. S. C.

The Young Farmer's Manual.—In reply to W. H. C., to Chas. J. Kingston, C. W., and a host of other inquirers after the 2d vol. of the "Young Farmer's Manual," the author would state that as soon as the illustrations can be engraved, and the stereotyping done, it will be issued. We hope to be able to get it out in a few months. The unsettled state of our country is the only reason why it has not been issued before. The names of those who have written for the 2d volume have been recorded, and they will receive a copy as soon as it is issued. S. Edwards Todd. *Auburn, Cayuga Co., N. Y.*

Hydraulic Rams—Water Engine.—Can any one inform us if *iron gas pipe* will corrode so as to fill up? What is the difference of cost per rod, of half inch lead or iron? I have a No. 5 Douglas ram, which I started with a lead *drive pipe*, and it burst and kept bursting. I then got a two inch iron pipe, which answers the purpose perfectly. This has been in about eight years, and the lead two. The brass valve wore out in about ten years—(a new one cost $3,) and several leather valves in the mean time, which are easily supplied by taking the machine apart. I have about eight feet head, 40 feet drive pipe, and deliver the water 100 feet high and fifty-two rods distance, 16 bbls. in 24 hours. The heavy rains raise the little brook so high that it troubles me to keep my dam up, and fills the pond with water. A spring would be much better. After ten years experience, I would advise every farmer or gardener who has a spring, or many places on the brook, to put up a ram or water engine. Suel Foster.

Cheshire Pigs.—Can any one inform me through The Cultivator, where pigs of the Cheshire breed can be had, with the price? L. H. Y.

Hickory for Hop Poles.—A correspondent wishes to know how to make hickory nuts grow, in order to propagate young trees to raise hop poles.

Stone-Picking Machine.—Will you let me know through the next Co. Gent., if you know of any machine for picking up stone of from 1 to 10 or 15 lbs. weight, to be worked by horses or cattle, and if you do not know of any, I should like to hear from any of your readers. F. O. C. *Connecticut.* [We do not know of any.]

Strawberries in Succession.—Please give a list of the best strawberries for a succession from the very earliest to the latest, in The Cultivator, and oblige L. O. [The best very early sorts are Jenny Lind and Large Early Scarlet; then Wilson, Triomphe de Gand, and Russell. There are several other good sorts, but these will do to begin with.]

Clover.—Much has been said and written on raising clover, but as it is the cheapest and perhaps the best plant to enrich poor soil, I ask farmers to give me their advice in regard to time in sowing, early or late. Do you grow the large kind—if so, how much would you advise me to sow per acre on land that I wish to pasture one year, and the next to turn a crop of clover under for manure? Do you prefer it for pasture and to enrich land, to the small kind? N. W.

Imphee and Sorgho.—I noticed in The Cultivator, an inquiry from C. L. Hartwell, for Imphee seed, called Oom-se-a-na. I have raised that variety, and am of the opinion that it will not mature north of Mason and Dixon's line. Judging from what I have planted, it would require two seasons to ripen it. Boo-e-o-na the same. The Nee-a-za-na is better, but that ripened only one year in four. It was represented to be earlier than Sorgho, but I have found it to be the reverse, and have abandoned it. I cultivated last year a different variety of Imphee that is three weeks earlier than Sorgho, but do not know the name of it. I have manufactured between 5,000 and 6,000 gallons of syrup from Sorgho, but think the syrup I made from the early Imphee much the best I ever made. As to the yield per acre, compared with Sorgho, I have not sufficiently tested it to know whether there is any difference. I think it will ripen in Central New York, or Connecticut, or Massachusetts. I have some of the seed of the early Imphee.

Cuyahoga Falls, Summit Co., Ohio, April 4. M. Griswold.

DOMESTIC GUANO.

Messrs. Editors—In the Co. Gent. of March 3d, your correspondent of West Berkshire, Vt., gives us his experience with home made guano, in which case it proved a failure, and he asks for information in regard to the cause, which I cheerfully give.

1st. He should have used one bushel of plaster to every five bushels of ashes, and the same amount of hen manure, (five bushels,) at the time of mixing on the barn floor, which would have retained the ammonia which escaped while laying in the heaps.

2d. He used double the quantity required in the hill when planting, which was placed under the corn, and as soon as the roots penetrated through the light covering of dirt to the ashes, they were destroyed to a great extent by being eat up by the alkali contained in the ashes.

I prize the mixture very highly, having used it with good success for twenty years past, by first dropping the corn, the ashes, plaster and hen manure to be sprinkled on the top of the corn, so that the tender roots can penetrate in the ground without first having to pass through the ashes, and then receive the nourishment of the mixture; the top being so much stronger, it will penetrate through the ashes if properly applied, without injury. A medium sized handful is sufficient for two hills, and as much as should be applied when planted; but if you have a surplus on hand, it can be safely and advantageously applied as a top-dressing to the hill after the corn is planted.

Bucks Co., Pa., A Working Farmer.

REMEDY FOR HORN AIL.

Messrs. Editors—I notice in your valuable paper from time to time, different receipts for different diseases. I send you mine for horn ail:

Take a feather from the wing of a fowl, and dip it in water—then sprinkle it with *fine salt*, and pass it up the nostrils of the animal, which will cause it to sneeze and throw off the matter that has collected in the head. Try it, brother farmers, and then report.

A Subscriber.

CURE FOR SCRATCHES IN HORSES.

Editors Co. Gent.—As this is the season when horses are most likely to be troubled with scratches, I here send you an easy, safe and sure cure.

Mix verdigris and milk, and rub it on the parts affected. Two applications are usually sufficient.

Camillus, N. Y., April 11, 1864. E. Marks.

GOODRICH SEEDLING POTATOES.

For $1 two pounds each of

Garnet Chili, Cuzco and Pink-Eye Rusty Coat,

(enough to raise five bushels,) sent postpaid.

GARNET CHILI and CUZCO per barrel by Railroad, $2.50.

P. SUTTON,
April 14—w2tm1t. Ransom, Luzerne Co., Pa.

ADIRONDAC GRAPE FOR SALE.

2 years old,	very strong,	No. 1,	$5.00
2 do.	strong,	No. 2,	4.00
1 do.	very strong,	No. 1,	3.00
1 do.	strong,	No. 2,	2.00

All cut back to 3 to 4 eyes.

A discount of 20 per cent to dealers on bills of $50 and over. The above prices and terms of discount will be strictly adhered to.

No INFERIOR vines will be sent out by me. Purchasers can rely on the quality of my vines being unsurpassed.

Will be forwarded in sealed boxes by Express. No charge for boxes. Or small orders will be securely packed and sent by mail, prepaid, when so ordered.

The two great Grape Exhibitions held last autumn at New-York and Cleveland, awarded to the Adirondac THE PRIZE FOR THE

BEST NATIVE GRAPE OF ANY KIND,

QUALITY TO RULE.

The discovery and introduction of the Adirondac Grape is an event of the highest importance to fruit growers, and the greatest advance yet attained by native grapes. Its peculiarities are extreme earliness, large berries and clusters, tender and thin skin, melting without any perceptible pulp, and of the most delicious and delicate flavor, reminding one of that splendid but hot house grape, the "Black Hamburgh." Address JOHN W. BAILEY.

Feb. 11—w13tm3t. Plattsburgh, Clinton, Co., N. Y.

SHORT-HORNS FOR SALE.

The Bull Hotspur, 4030 A. H. B., rich roan, calved May 15, 1860—by Duke of Gloster (11382) dam imported Daphne by Harold (10299.) Also three Yearling Bulls and five Bull Calves, (all but one got by Hotspur,) and a few Heifers. Catalogues sent on application.

T. L. HARISON,
March 24—wtfm3t. Morley, St. Lawrence Co., N. Y.

LODI POUDRETTE!—The Lodi Manufacturing

Company, with an experience of twenty-four years, again offer for sale a uniform article of POUDRETTE at low prices.

The experience of thousands of customers attests the fact that it is the cheapest and the VERY BEST MANURE IN THE MARKET, and particularly adapted for TOBACCO, CORN, POTATOES and GARDEN TRUCK.

The Company manufactures also BONE TAFEU, (a substitute for Guano,) from bone, night soil and guano, ground fine. Price, $45 per ton.

A pamphlet containing directions for use, prices, &c., may be had free by addressing a letter to the

LODI MANUFACTURING COMPANY,
March 10—w8tm2t. 66 Courtlandt St., New-York.

CHEAP FARM FOR SALE.

I will sell my farm situated about 2½ miles from Tuckerton, Burlington Co., N. J., where is at all times a better market for farm produce than New-York or Philadelphia, having a standing offer by the millers and merchants for pork and grain, freight added. At Tuckerton are several large stores, grist and saw mills, churches, mechanics of all kinds, and plenty of schools. Farm contains about 500 acres, 100 upland, balance salt meadow, producing hay now worth from $6 to $8 per ton, a large quantity of which might, with slight cost, be banked in so as to produce fresh grass or grain. The upland is in a high state of cultivation, having been recently highly manured and limed, and is well adapted to wheat, corn or grass No sandy land on the farm. There is a two story frame dwelling, large barn 40 by 40 feet, recently repaired with new roof, &c., new hay house, cow house, crib and wagon house, &c., large apple orchard, and a variety of pear trees in full bearing. A beautiful view of the great bay where fish and oysters abound. Will be sold very low, as I live too far away to give it my attention, having full business at home; it is clear of incumbrance. Price, $6,000; part of the purchase money can remain secured if desired. Address E. OLIPHANT,
April 14—w&mtl. New Lisbon, N. J.

NEW-YORK STATE TILE WORKS,

NEAR THE CORNER OF

LARK & LYDIUS-STREETS, ALBANY, N. Y.

WM. M. BENDER, Proprietor. | **GEORGE JACKSON, Superintendent.**

The subscriber is prepared to furnish Round, Sole and Horse-Shoe Tile, over 13 inches in length, by the cargo, or in the smallest quantity on demand, at prices that he will defy any other parties to undersell him. He will warrant his tile hard burnt, and to fit close at the joints, and altogether superior to any made in the United States.

All tile delivered on board of cars and boats in this city free of charge. Price list sent on application.

Also DRAINING TILE MACHINES for sale of the latest improved Patterns. For further particulars address as above. Ap. 7—w&m.

EGGS FOR HATCHING.

Eggs of the following breeds, warranted pure, carefully packed and delivered anywhere in Boston, for $1 per dozen: WHITE FACE BLACK SPANISH, BRAHMA POOTRA, WHITE LEGHORNS and FANCY BANTAMS. Address O. H. PECK,
April 7—w6tm1t. Box 5, Melrose, Mass.

LARGE FARM FOR SALE—Consisting of 800

acres, 4 miles south of Perrysburg and 12 miles from Toledo. It embraces prairie and timber land. One hundred and sixty acres are under improvement and other portions are partially improved. The soil is very rich, and with a moderate outlay it may be made one of the most productive farms of its size in Ohio, the soil being specially adapted to the growth of Tobacco, Flax and other products requiring a soil of extraordinary fertility. The surrounding country is considerably improved. A good dirt road passes straight from Perrysburg, through the farm, adjoining which are two school houses. Perrysburg being on the navigable waters of Lake Erie, affords a good market for farming products, and good society. The Dayton and Michigan Railroad has a station within 2 miles of the land, from which a half hour by rail will take the passenger to Toledo. Being well adapted to grass, it would make a productive stock farm. If desired by the purchaser, 640 acres, embracing an entire section, and most of the prairie, and all of the improvements, would be sold by itself. Terms $5,000 on giving possession, and balance on long time, if desired, at 6 per cent. The whole tract would be sold at $15 per acres or the section by itself at $18 per acre.

SCOTT & ROSS, Real Estate Agents,
Oct. 22—w&mtf. 132 Summit-St., Toledo, Ohio.

SHEEP WASH TOBACCO.

JAQUES' PURE EXTRACT OF TOBACCO

Kills Ticks on Sheep.
Cures Scab on Sheep.
Kills all Vermin on Animals and Birds.
Cures all Skin Diseases on Animals.
Kills Bugs on Roses, Lice on House Plants.
Kills Canker Worm on Apple Trees.
Kills all Vermin that infest Grape and Cranberry Vines.

One Pound of this Extract will Make Sixteen Gallons of Wash.

For sale by all Druggists, and at country and agricultural stores.
Price 75 cents per pound. A liberal discount to the trade and large purchasers

Orders promptly sent by express.

JAMES F. LEVIN,
Agent South Down Co.,
23 Central Wharf, Boston.

DUDLEY & STAFFORD, DRUGGISTS, 69 Beekman Street, New-York.

R. H. ALLEN & CO., AGRICULTURAL WAREHOUSE, 189 & 191 Water Street, New-York.

Feb. 4—weow13tm3t.

RURAL ADVERTISER,

OF EIGHT QUARTO PAGES.

A MONTHLY PUBLICATION, DEVOTED TO

AGRICULTURE. HORTICULTURE. AND RURAL ECONOMY.

At 25 Cents per annum, payable in advance. Published by PASCHALL MORRIS, 1,120 Market-St., Philadelphia, Where subscriptions will be received. Sept. 24—w&mtf.

BOARDMAN & GRAY'S

PATENT IMPROVED

INSULATED IRON RIM AND FRAME

PIANO FORTES.

MANUFACTURED BY

WILLIAM McCAMMON,

(Successor to BOARDMAN, GRAY & Co.,)

Albany, N. Y.

☞ Send for Illustrated Price List. Jan. 1—mtf.

DOWNING'S FRUIT AND FRUIT TREES

OF AMERICA.—New Edition—price, $2. For sale at this office.

SEED WHEAT FOR SALE.

The subscriber has a lot of the

Celebrated Tea Wheat

for sale, very nice for seed. All orders addressed to him as follows will receive prompt attention. R. M. WAGAN,
April 14—w3t. Mt. Lebanon, N. Y.

POTATOES FOR SEED.

"BULKLEY'S SEEDLING," equals the Peach Blow in table qualities, and surpasses it in productiveness, and never rots.

"MONITOR," good size and white skin; flesh mealy; delicate flavor, superior for baking; ripens early. Price, $4 per bag of 2 bush.; in quantities, 5 barrels, $20; 10 barrels, $30. Address with remittance,

C. M. SAXTON, New-York.
Or, T. VAIL, 21 Maiden Lane, New-York. April 14—w2t.

NORWEGIAN CORN FOR SALE.

Early eight-rowed yellow corn that will ripen in six or eight weeks from the time it is planted. Ears from six to nine inches in length, depending upon the strength of the soil. On the receipt of 25 cents, will forward enough to plant 100 hills. Address

April 7—w4t. H. B. MANN, Burlington, Vt.

SWEDISH WHITE CLOVER SEED FOR SALE.

One of the greatest plants in existence for the production of White Honey, and of the most delightful flavor. On receipt of 25 cts. I will send seed enough, postpaid, by mail, to sow three or four rods of ground, or three times this amount on receipt of 50 cents; being very productive. Seed enough in a short time can be raised to sow a farm all over. K. P. KIDDER,
April 7—w4t. Burlington, Vt.

LINNÆUS RHUBARB OR WINE PLANT.

A Large Stock for Sale Low by the Thousand.

April 7—w4t. GEORGE BAKER, Toledo, Ohio.

EVERGREENS FOR SALE.

We have a very large and fine stock of

Hardy Evergreens,

three times transplanted, of the following varieties and sizes, which we offer at low rates by the thousand:

NORWAY SPRUCE, from 2 to 5 feet.
AUSTRIAN PINE, from 3 to 5 feet.
SCOTCH PINE, from 3 to 6 feet.

Also all kinds of FRUIT and ORNAMENTAL TREES at wholesale.

April 7—w4t. GEO. BAKER, Toledo Nurseries, Toledo, Ohio.

RASPBERRIES AND STRAWBERRIES.

PHILADELPHIA

is the best and most productive HARDY RASPBERRY; yielded with me last year 220 bushels per acre of large, red, luscious fruit—$2.50 per dozen, $15 per 100.

FRENCH,

the most valuable EARLY STRAWBERRY, large, handsome and attractive, $1 per dozen; $6 per 100.

RUSSELL'S PROLIFIC,

very fine, $1.50 per dozen; $9 per 100.

Catalogues gratis. WILLIAM PARRY,
April 7—w3t. Cinnaminson, N. J.

GOODRICH SEEDLING POTATOES.

GARNET CHILI, CUZCO,

Pink-Eye Rusty Coat & Callao,

For sale at $3 per barrel, delivered at Railroad or Express.

April 7—weow2t. CHAS. W. GLEASON, Holden, Mass.

GRAPEVINES FOR SALE.

DELAWARE, Layers, very superior.
do. from eyes.
CONCORD LAYERS.

Together with the usual varieties. Send for Circular.

March 31—w3t. B. H. MACE, Newburgh, N. Y.

WHITE OR GREY WILLOW.

Cuttings of this valuable Fence and Screen Tree, genuine 10,000 packed, $28. Liberal discount to the trade.

CURRANTS, 20 sorts, strong, 2 years, Red Dutch, $20 per 1,000.
GOOSEBERRY, strong, 2 and 3 years, Houghton and Cluster, $30 per 1,000.
RASPBERRY, Doolittle, true, $25 per 1,000; Catawissa, 15 cts. each.
GRAPES, 40 sorts, 1 and 2 years, Catawba, Concord and Delaware, —per 1,000—all wintered in cellars or well covered trenches.
ROOT GRAFTS, Apple, in prime order, $70 per 10,000, packed.
APPLE TREES, best stock ever offered, largely of proved hardy sorts for the Northwest, 1 to 4 year, $40 to $85 per 1,000.
Also Pear, Plum, Cherry, &c., &c., and a great stock of Evergreens and Ornamentals.

☞ Send red stamp for new Catalogues. Address

March 31—w4t. F. K. PHŒNIX, Bloomington Nursery, Ill.

FLOWERS IN THE WEST

My Catalogue of plants, consisting of Verbenas, Geraniums, Petunias, Fuchsias, Dahlias, Carnations, Roses and Green-House Plants generally, along with hardy Border Plants, Shrubs, Small Fruits, &c., will be ready on the first of March. Send for our Catalogue, examine our prices, and send no longer East for what you may just as well buy at home. EDGAR SANDERS,
March 24—w3t. Box 4183, Chicago, Ill.

1864 THE ILLUSTRATED ANNUAL 1864
REGISTER OF RURAL AFFAIRS.

NO. X---FOR 1864.

One Hundred and Thirty Engravings!

The Tenth Number of the ILLUSTRATED ANNUAL REGISTER OF RURAL AFFAIRS is now in press, and will be issued without farther delay.

Its contents embrace, as usual, a large variety—including Agriculture and Rural Economy at large, Horticulture, The Dairy, Domestic Economy, etc.

It is illustrated by nearly ONE HUNDRED AND THIRTY ENGRAVINGS, of which the larger part are from drawings especially prepared for the present Number.

Beside the usual Calendar pages, presenting calculations for the three different parallels of the New-England, the Middle and the Border States, the following synopsis will partially show the chief subjects treated and the ground covered in the "ANNUAL REGISTER for 1864."

I FARM DUTIES PERFORMED IN SEASON—FIFTY-SIX ENGRAVINGS.
II.—ROAD MAKING—TEN ENGRAVINGS.
III.—MANAGEMENT OF SWINE—FIVE ENGRAVINGS.
IV.—MECHANICAL CONTRIVANCES.—TWENTY-TWO ENGRAVINGS.
V.—DAIRY FARMING AND CHEESE MAKING—SIX ENGRAVINGS.
VI.—COLLECTING AND PRESERVING INSECTS—NINE ENGRAVINGS.
VII.—FRUIT CULTURE—THREE ENGRAVINGS
VIII.—DOMESTIC ECONOMY—SIX ENGRAVINGS.
IX.—RURAL ECONOMY.
X.—THE POULTRY-YARD—EIGHT ENGRAVINGS.

Single Copies Twenty-Five Cents.

FIVE COPIES,	One Dollar.
TWELVE COPIES,	Two Dollars.
FIFTY COPIES,	Eight Dollars.
ONE HUNDRED COPIES,	Fifteen Dollars.

But at these rates, owing to the increased cost of paper, composition &c., we can no longer pay the postage (Two Cents per copy) ourselves as heretofore; and where copies are ordered by mail, the POSTAGE MUST BE ADDED therefore to the prices given above.

For still larger quantities for sale by agents, favorable terms will be given. ALL ORDERS to be accompanied by CASH.

Address all orders or inquiries to the publishers.

LUTHER TUCKER & SON,
ALBANY, N. Y.

, COMPLETE SETS OF THE ANNUAL REGISTER—Ten years—paper covered, comprising about TWELVE HUNDRED PAGES of Reading Matter and nearly FIFTEEN HUNDRED ENGRAVINGS, will be sent by mail postpaid for $2: previous numbers are also sent separately at 25 cents each, or any five of them for $1. Complete sets of the Nine Numbers previous to 1864, bound in Three handsome Volumes, on larger, heavier and finer paper, are also for sale, at $1.25 each, or $3.75 for the three postpaid—sold together or separately, as may be desired.

To Subscribers at Two Dollars per Year.

1. Decidedly the most valuable invention we know of for readers of such a journal as the COUNTRY GENTLEMAN, is JACOB'S PORTFOLIO FILE, in which the papers are inserted from week to week, as they are issued, and which preserves them in excellent order for constant reference, and fully equal to a bound volume at the close of the year. The retail price of this Portfolio or Cover, is $1. We have made arrangements by which we can now offer

Ten Copies of the Country Gentleman and Ten Portfolio Files for $20.

Thus in effect giving each reader the means of rendering his paper OF DOUBLE VALUE, by having it always at hand and in order. The Portfolio Files must be sent by express at the expense of the club, and if put into one package, the cost of transportation will not be large. *,* If it is impossible to make up A FULL CLUB under this offer, subscribers at ordinary club rates may obtain single copies of the File by adding 75 cents each to their remittances when the club money is sent on.

2. For FIVE subscribers to the COUNTRY GENTLEMAN, sent at one time, with $10, we will present a copy of the ANNUAL REGISTER for 1864, to EACH SUBSCRIBER, and to the person sending them, a copy of "My Farm of Edgewood," postpaid, a new and very interesting book by DONALD G. MITCHELL, containing many suggestions of practical value.

3. Any subscriber who sends TWO NEW NAMES at the same time with his own, (and $6,) shall receive the ANNUAL REGISTER for each of the three, and one COUNTRY GENTLEMAN PORTFOLIO FILE for himself.

SPECIMEN NUMBERS of both the COUNTRY GENTLEMAN and THE CULTIVATOR will be sent on application—also Show bills and Prospectuses for the New Year.

Address LUTHER TUCKER & SON,
Albany, N. Y.

THOMAS' AMERICAN FRUIT CULTURIST

Illustrated with Three Hundred accurate figures—price, $1.25 For sale at this office.

CONTENTS OF THIS NUMBER.

The Farm.

Sugar Making at the West, ... 137
Seeding to Grass, ... 138
The Bean Crop, by H. E. Olinger, ... 138
The Potato Bug, by H. P. B., ... 139
Prices of Cheese, Butter and Wool, ... 140
Seeding Wood Lands to Blue Grass, by H. P. B., ... 140
On the Culture of Turnips, by C. T. Alvord, ... 142
Does Farming Pay? by Buckeye, ... 143
How to Prepare and Use Domestic Guano, by S. B. Elliott, 143
The Manure Question, ... 144
The Yellow Globe Mangold, by J. C. J., ... 145
Dent Corn in Northern Ohio and New-England, by H. C. J., 146
Setting Fence Posts, by C. A. Van Valkenburgh, ... 146
Flax and Barley Grown Together, by Jas. McCollum, ... 147
Underdraining a Remedy for Wire Worms, by J. A. Fenwick, ... 148
Facts and Figures in the Agricultural Department, ... 154
Agriculture of Iowa, ... 156
Discharge of Tile Drains, by Seneca, ... 157
Staking Virginia Fence, by J. W., ... 159
Black Oats, by L. F. Scott and O. W. True, ... 159
Notes for the Month, ... 160
Inquiries and Answers, ... 163
Domestic Guano, by a Working Farmer, ... 165

The Grazier.

A "Deacon Skinner," by J., ... 139
Sheep Pulling their Wool, by Henry Voorhees, ... 139
Remedy for Horn-Ail, by M. W. H., ... 139
Remedy for Botts, by Buckeye, ... 147
How I Raise my Calves, by S. R. Woods, ... 147
A Cure for Hoven or Wind Colic, by Geo. Gill, ... 149
Remedy for Itch or Scab in Sheep, by Common Sense, ... 151
Remedy for Fistula and Poll Evil, by Buckeye, ... 155
Cure for Scratches in Horses, by E. Marks, ... 165
Remedy for Horn Ail, by A Subscriber, ... 165

Horticultural Department.

Suggestions to Tree Planters, ... 138
Horticultural Notes, ... 148
Culture of the New Rochelle Blackberry, by Amos Fish, ... 148
Planting Peach Pits—Grafting the Grape, by Jos. Baldwin, 151
Pruning Peach Trees, by W. Petrie, ... 152
Training Grapes, by S. Worden, ... 152
Laying Out Orchards, ... 153
The Turban Squash, ... 153
Sending Seeds and Plants by Mail, by H., ... 157
Grafting the Pie Cherry, by A. L. Wood, ... 159

The Dairy.

Feeding and Produce of Milch Cows, by S. R. Woods, ... 149
How I Keep a Cow, by Amos Fish, ... 151
The Improvement of Dairy Stock, ... 155

Domestic Economy.

How to Treat the Whooping Cough, by Buckeye, ... 146
Ventilating Cellars, ... 146
Creak and Pains in the Loins of the Back, by S. W. Jewett, 146
The Way to Make Lacquer, by S. E. Todd, ... 147
Neats Foot Oil—How Made, by H. and W. B. H., ... 147
How to Obtain Neats Foot Oil, by S. E. Todd, ... 149
How to Make Hair Dressing, by S. E. Todd, ... 149
How I Cured a Rupture, by S. W. Jewett, ... 150

Poultry-Yard.

Gapes in Chickens, by J. C. Thompson, ... 145
Successful Experience in Poultry Keeping, by Brooks, ... 150

Bee-Keeper's Department.

Materials for Bee-Hives, by C. J. Robinson, ... 145
Loss of Queen, by L. L. F., ... 150

Birds.

The Mocking Bird and Snow Bunting, by J. P. Norris, ... 158

Illustrations.

A "Deacon Skinner," ... 139
Ventilating Cellars, ... 146
Pruning Peach Trees, ... 152
Training Grapes, ... 152
Laying Out Orchards, ... 153
The Turban Squash, ... 153
Mocking Bird, ... 158
Snow Bunting, ... 158

CHESHIRE HOGS
From premium stock. Address JAMES S. McCALL,
April 21—w2t. Lyons, N. Y.

RUSSELL'S PROLIFIC.—I offer a few hundred plants of Russell's Prolific, the best Strawberry yet proved. Price, $5 per 100. THOMAS R. PECK,
April 21—w1t. Waterloo, N. Y.

WESTERN SORGHO SEED.
30 cents a quart, (with full directions,) warranted pure. Also Oomseeana, Neeazana and Imphee Seed. Address immediately
April 21—w1t JAMES S. McCALL, Lyons, N. Y.

BERKSHIRE PIGS,
Of different ages and fine quality, and late cross of T. Penton, Canada West, for sale by EDWARD WAIT,
April 21—w1t. Walden, Orange Co., N. Y.

SWEET POTATO PLANTS.
$2.25 per Thousand.
The above plants are warranted of the Lebanon Yellow or Nansemond variety, and well packed for travelling, in boxes of 5,000 and 10,000 each, grown by F. A. SCHWILL & BRO.,
April 21—w6t. Cincinnati, O.

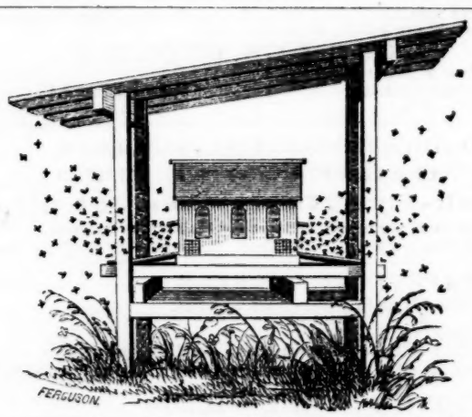
NANSEMOND SWEET POTATO PLANTS.
Of best quality, during May and June. Put up to carry safely long distances.
Price—300, $1; 1,000, $2.50; 5,000, $11; 10,000, $20.
This variety is hardy and prolific, being profitably grown forty-four degrees north.
Send for our Circular, containing instructions in cultivation and experience of those growing them. Address
MURRAY & CO.,
Foster's Crossings,
April 21—eowtf. Warren Co., Ohio.

GOODRICH SEEDLING POTATOES.
GARNET CHILI, PINKEYE RUSTY COAT, CUZCO, COPPER MINE and CENTRAL CITY, for sale at
$1.25 PER BUSHEL.
Address W. H. BENSON,
April 21—w1t. Jamestown, Chautauqua Co., N. Y.

VERBENAS, ROSES, &c.
PER MAIL PREPAID.
VERBENAS, a fine selection of 75 varieties, $1.50 per dozen.
ROSES, many good sorts, small well rooted plants, $1.50 per dozen.
FUCHSIAS, GERANIUMS, CUPHEAS, &c., $1.50 per dozen.
Larger plants per Express at customary rates.
April 21—w1t. E. Y. TEAS, Richmond, Ind.

GLADIOLUS, PHLOXES, &c
1,000 GLADIOLUS, 60 varieties, 20c. each; $2 per doz.
3,000 PHLOXES, 50 varieties, 25 c. each; $2 per doz.; $10 per 100.
10,000 VERBENAS, 100 var., 15c. each; $1.50 per doz.; $9 per 100.
Dahlias, Fuchsias, Roses, and a large assortment of Hardy Bedding and Green-House Plants. Catalogues on application.
April 21—w1t. J. C. TEAS, Raysville, Henry Co., Ind.

APPLES, GRAPES AND BOX VERY CHEAP.
The ground must be cleared.
5,000 APPLE TREES, 5 to 7 feet, at $50 per 1,000—Greenings, Baldwins, Kings, &c.
5,000 Oporto Vines, 2 to 3 years, first quality, $100 to $125 per 1,000.
5,000 Dwarf Box 4 to 6 inches above the collar, were transplanted, $10 per 1,000.
1,000 Black Naples Currants, 2 years, fine, $35.
April 21—w1t. E. WARE SYLVESTER, Lyons, N. Y.



The above cut represents IDE'S STRAW LINED BEE-HIVE, patented April 2d, 1861, in its position under an appropriate shed. This hive is so constructed as to effectually protect bees from the injurious and often fatal effects of cold in winter, by the employment of a lining composed of straw. The straw being laid or so disposed as to form a series of horizontal tubes to serve as ventiducts, the straw or porous wall being separated from the outer case so as to leave an air space. Perforations are made—as shown in the cut—to allow the external air to circulate in the air space, and through the tubes of the straw, rendering the hive dry. Straw being a slow conductor of heat, the animal heat of the bees is principally retained in the hive, which favors their wintering, and forwards brooding in early spring. By this arrangement the bees are kept in a comfortable and prosperous condition. I have recently made some improvements in this hive which cheapen it, and at the same time add much to its practical value. Thus improved, the bees are more directly admitted to the boxes, which very materially favors the storing of box honey. To introduce the hive into more immediate and general use, I have concluded to sell the Individual Right for $4. On the receipt of this sum I will send by return mail a deed for an Individual Right, with exact engravings and specification so complete that any mechanic can make a hive without difficulty. Price of a neatly made specimen hive, $3. Address SAMUEL IDE,
April 14—w2tm1t. East Shelby, Orleans Co., N. Y